Crusader
ENGINES



MARINE ILLUSTRATED PARTS MANUAL

MODEL MP5.0/5.7L

2002 - 2005 MY

This Page Was

Intentially

Left Blank

Contents:

“TYPICAL VIEWS ARE SHOWN”

ENGINE ROTATION

Engine Rotation is identified as “RH” or “LH” with the engine model number. Rotation always is determined from the flywheel end looking toward the front of the engine. In some instances, propeller shaft rotation may be opposite to that of the engine.

When ordering a replacement engine, production block or parts for the engine, be certain to check engine rotation. **DO NOT rely on propeller rotation in order to determine engine rotation.**

LEFT-HAND ROTATION is STANDARD ROTATION.

(Flywheel turns counterclockwise when viewed from flywheel end of the engine.)

RIGHT-HAND ROTATION is OPPOSITE ROTATION.

(Flywheel turns clockwise when viewed from flywheel end of the engine.)

HOW TO READ THIS PARTS BOOK:

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RB001005H	**Base Engine Assembly**, 5.7L	1
①	②	③	④

① ITEM NUMBER - This number corresponds with the number in the exploded view on the facing page.

② PART NUMBER - This is the designated part number for the particular component or assembly.

③ DESCRIPTION - This identifies what the component or assembly is.

④ QUANTITY - This refers to the number of pieces used.

==

Symbols shown throughout parts list are defined here or on the bottom of the individual parts list page.

AR	=	As Required
OPT	=	Optional
NSS	=	Not Serviced Separately
NA	=	Not Available
SS	=	Single Station Control
DS	=	Dual Station Control
OS	=	Oversize
US	=	Undersize
TBD	=	To Be Determined
NI	=	Not Illustrated

==

REPLACEMENT PARTS:

WARNING:

Electrical, ignition and fuel system components on Crusader Engines are designed and manufactured to comply with U.S. Coast Guard rules and regulations to minimize risks of fire or explosion.

Use of replacement electrical, ignition and fuel system components which do not comply with these rules and regulations could result in a fire or explosion hazard and should be avoided.

==

MAINTENANCE ITEM PART NUMBERS:

Description	Part Number
Oil Filter	22679
Kit, Transmission Oil Filter (ZF)	RP077011
Fuel Filter	RP080026
Spark Plugs	RP030010
Spark Plug Wire Set	RK120018A
Spark Plug Wire Set (RH)	RK120020
Alternator Drive Belt (70 Amp, MY ‘02-’04)	R066008
Alternator Drive Belt (100 Amp, MY ‘02-’04)	96307
Serpentine Drive Belt (LH, 70 Amp, MY ‘05)	R066028
Serpentine Drive Belt (LH, 100 Amp, MY ‘05)	R066030
Serpentine Drive Belt (RH, 70 Amp, MY ‘05)	R066029A
Serpentine Drive Belt (RH, 100 Amp, MY ‘05)	R066031
Impeller Kit	RP061017
Impeller Kit (MY ‘05)	RP061022
Thermostat (RWC)	R026002
Thermostat (FWC ‘01-’03)	R026002F
Thermostat (FWC ‘04-’05)	R026007

==

CHANGE NOTICE:

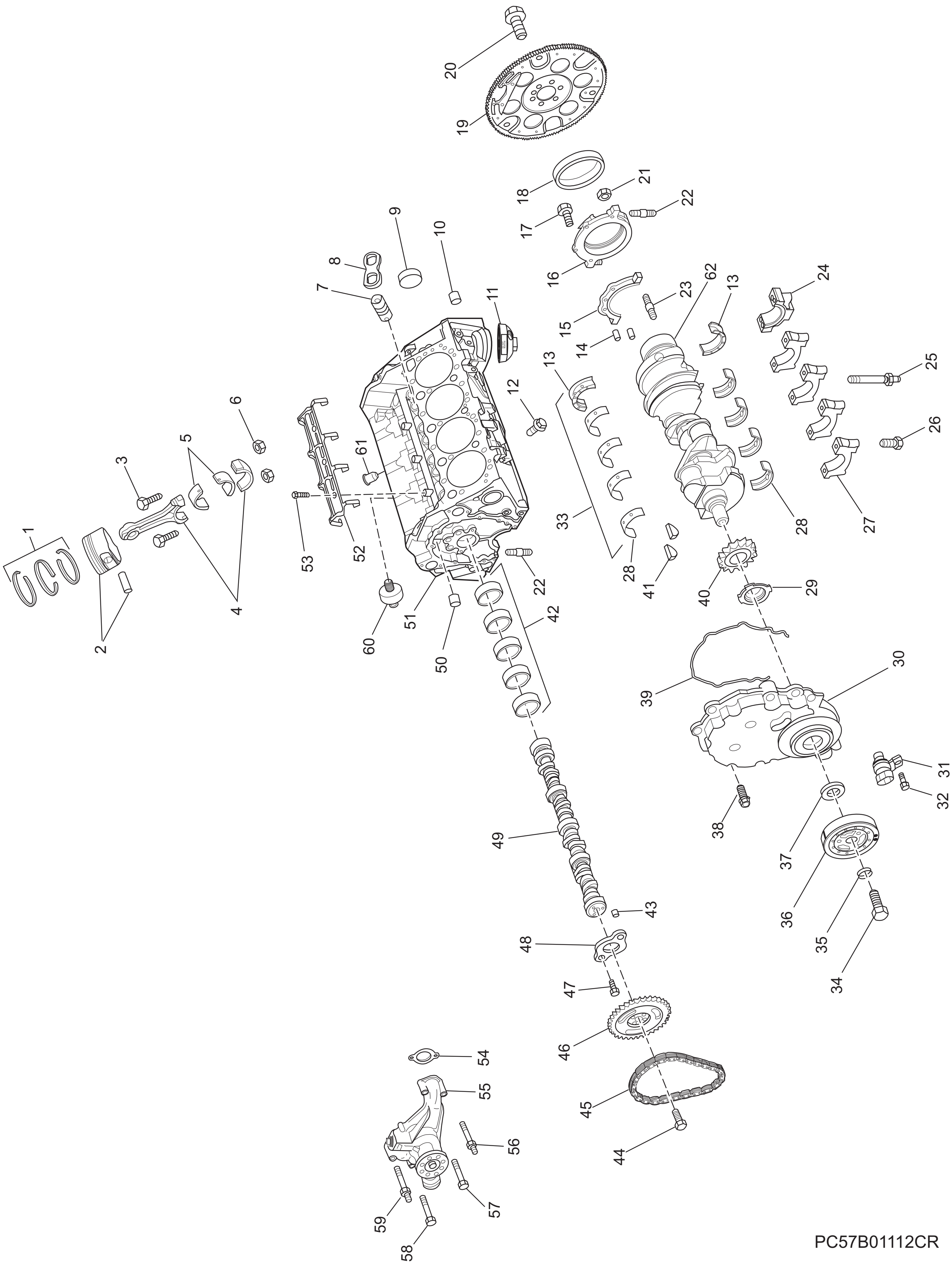
Change Pages	Date Updated
83, 95	04/07
29, 60-61, 83	05/07

MARINE TRANSMISSIONS:

Crusader Engines are equipped with Velvet Drive or Hurth Transmissions, or “V”-drives. If transmission parts are required, contact your dealer or closest Crusader Parts Distributor for required parts.

Parts manuals and overhaul manuals are available through Crusader Distributors.

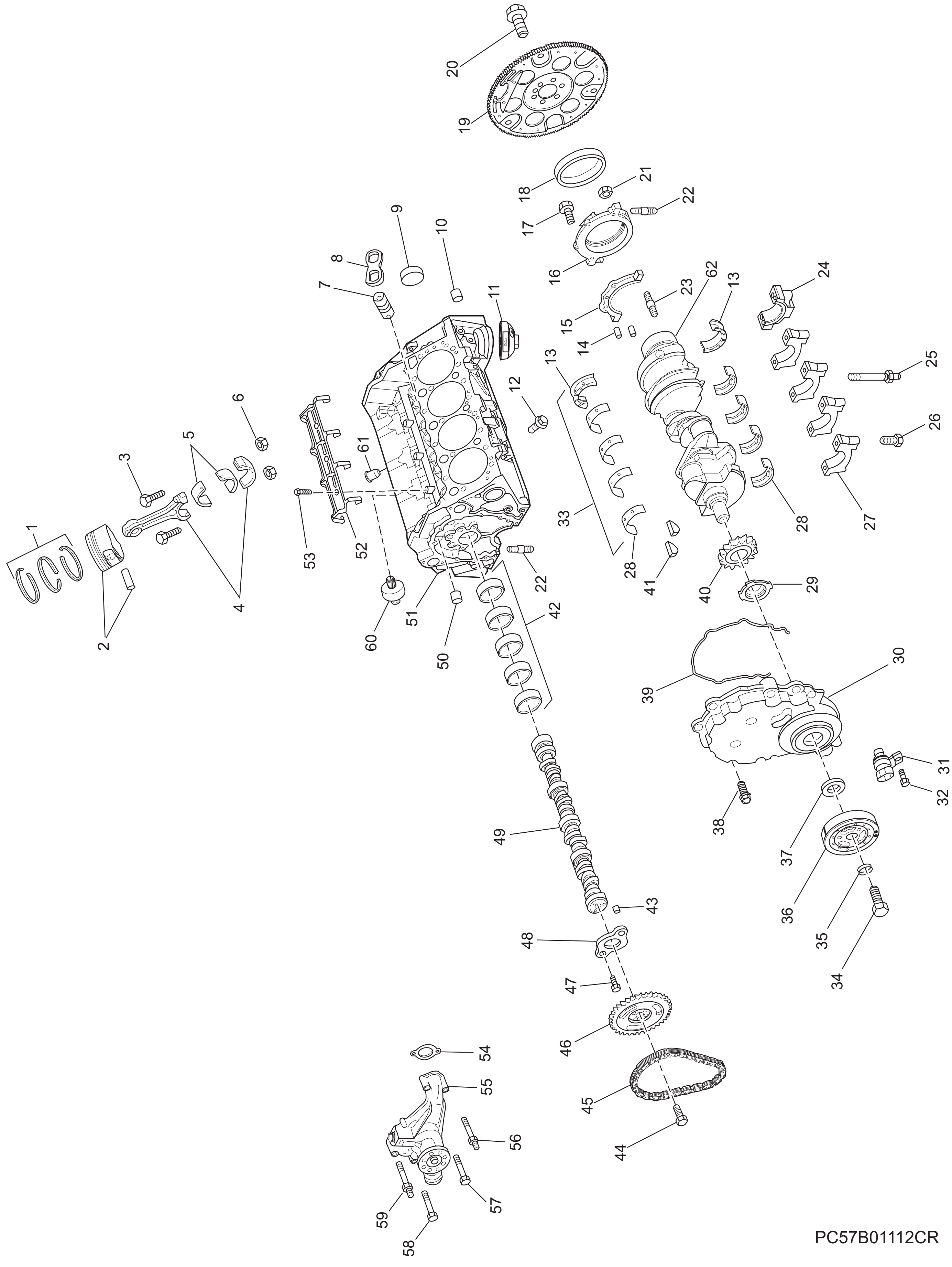
CYLINDER BLOCK ASSEMBLY - FIGURE 1



CYLINDER BLOCK ASSEMBLY - FIGURE 1

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
*	RB001005H	**Base Engine Assembly (LH)**	AR
*	RB001005A	**Base Engine Assembly (RH)**	AR
1	R015013	**Ring Set**, piston 5.7L (STD)	8
1	R015006	**Ring Set**, piston 5.0L (STD)	8
2	RA013016	**Piston**, 5.7L (STD)	8
2	RA013017	**Piston**, 5.0L (STD)	8
3	7080280	**Bolt**, connecting rod cap	16
4	RA011012	**Connecting Rod** (STD)	8
5	R007023	**Bearing Set**, connecting rod (STD)	8
6	7080050	**Nut**, connecting rod cap	16
7	R035038	**Lifter**, roller, valve	16
8	R037001	**Guide**, valve lifter	8
9	R069064	**Plug**, camshaft	1
10	33089	**Plug**, oil gallery	3
11	R079051	**Adapter**, oil bypass 5.7L	1
12	RS3552	**Plug**, engine block coolant drain hole	2
13	7050680	**Bearing**, crankshaft rear main (STD)	1
13	7057200	**Bearing**, crankshaft rear main (.001 US)	AR
13	7057220	**Bearing**, crankshaft rear main (.010 US)	AR
13	7057230	**Bearing**, crankshaft rear main (.020 US)	AR
14	7070340	**Pin**, crankshaft rear oil seal housing alignment	1
15	7070370	**Gasket**, crankshaft rear oil seal housing	1
16	R134070	**Housing**, crankshaft rear oil seal	1
17	7057250	**Bolt**, crankshaft rear oil seal housing, short	2
17	7057260	**Bolt**, crankshaft rear oil seal housing, long	1
18	R047173A	**Seal**, crankshaft rear oil (LH)	1
18	R047175	**Seal**, crankshaft rear oil (RH)	1
19	RA138008	**Flywheel Assembly** (Top Mount Starter)	1
19	RA138010	**Flywheel Assembly** (Bottom Mount Starter)	AR
20	7070480	**Bolt**, flywheel attaching	6
21	7057270	**Nut**, crankshaft rear oil seal housing	2
22	TBD	**Stud**, crankshaft rear oil seal housing	4
23	7050700	**Stud**, crankshaft rear oil seal housing	2
24	NSS	**Cap**, crankshaft bearing #5	1
25	7050870	**Stud**, crankshaft bearing cap	5
26	7050690	**Bolt**, crankshaft bearing cap	5
27	NSS	**Cap**, crankshaft bearing #1 - #4	4
28	7050670	**Bearing**, crankshaft main (STD)	4
28	7057170	**Bearing**, crankshaft main (.002 US)	AR
28	7057180	**Bearing**, crankshaft main (.010 US)	AR
28	7057190	**Bearing**, crankshaft main (.020 US)	AR
29	R056001	**Ring**, crankshaft position sensor reluctor (LH)	1
29	R056001A	**Ring**, crankshaft position sensor reluctor (RH)	1

CYLINDER BLOCK ASSEMBLY - FIGURE 1 (cont’d)

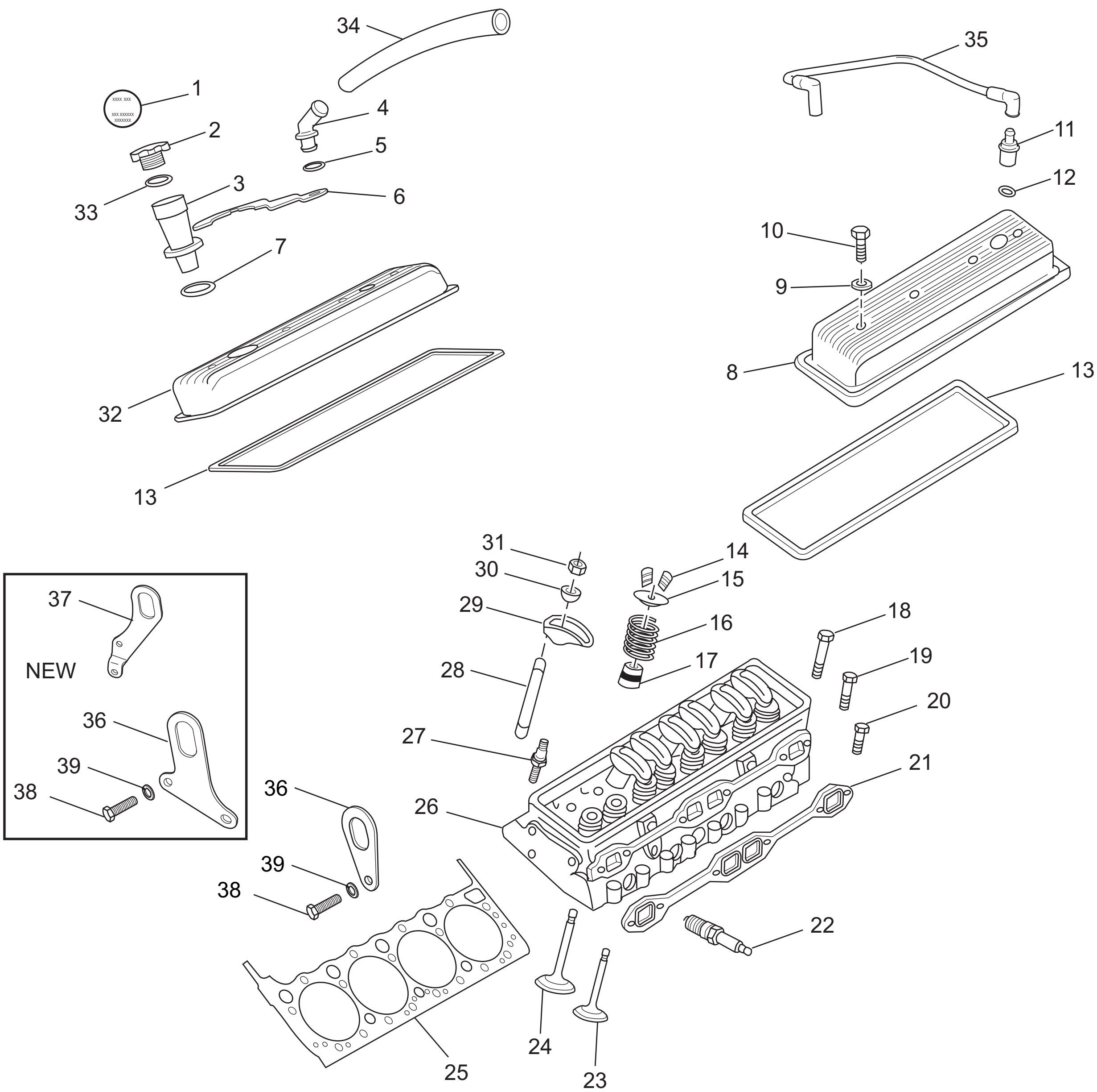


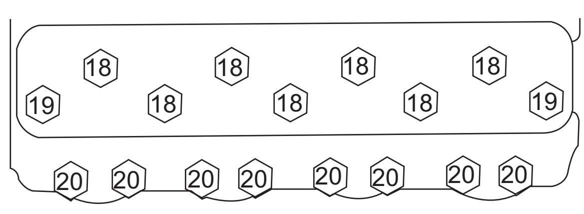
PC57B01112CR

CYLINDER BLOCK ASSEMBLY - FIGURE 1 (cont'd)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
30	R004010A	**Cover**, engine front cover (includes gasket and seal, '02-present)	1
30	R004010	**Cover**, engine front cover (includes gasket and seal, '97-'01 MY)	1
31	R020038	**Sensor**, crankshaft position	1
32	TBD	**Bolt**, crankshaft position sensor attaching	1
33	RK007020	**Bearing Set**, crankshaft main (STD)	1
34	R009091	**Bolt**, crankshaft balancer	1
35	R096074	**Washer**, crankshaft balancer bolt	1
36	R064010A	**Balancer**, crankshaft ('02 and newer)	1
36	R064010	**Balancer**, crankshaft ('97 - '01)	1
37	NSS	**Seal**, crankshaft front oil	1
38	R009177	**Bolt**, engine front cover attaching, short	6
38	R009176	**Bolt**, engine front cover attaching, long	2
39	NSS	**Gasket**, engine front cover	1
40	R054024	**Sprocket**, crankshaft	1
41	R164024	**Key**, crankshaft balancer	2
42	RK051030	**Bearing Set**, camshaft	1
42	7050630	**Cam Bearing #1**	1
42	7050640	**Cam Bearing #2 & #5**	2
42	7050650	**Cam Bearing #3 & #4**	2
43	R022022	**Pin,** camshaft sprocket locating	1
44	30698	**Bolt**, camshaft sprocket attaching	1
45	R055011	**Chain**, camshaft timing	1
46	R054041	**Sprocket**, camshaft	1
47	7070700	**Bolt**, camshaft retaining	2
48	R109050	**Retainer**, camshaft	1
49	RA050021	**Camshaft**, engine (LH)	1
49	RA050022	**Camshaft**, engine (RH)	1
50	7050740	**Plug**, oil gallery	1
51	NSS	**Block**, engine	
52	R090253A	**Retainer**, valve lifter	1
53	RS0279	**Bolt**, valve lifter retainer	3
54	RM0203	**Gasket**, water pump to engine block	2
55	RA057027	**Water Pump Assembly**	1
56	R095026	**Stud**, water pump attaching	1
57	RS0307	**Bolt**, water pump attaching	1
58	90305275	**Bolt**, water pump attaching	1
59	R095026	**Stud**, water pump attaching	1
60	R020027	**Sensor**, knock	1
61	98144	**Plug**, block, dipstick (305/350)	1
62	R006017A	**Crankshaft**, 350 1996/Later	1
NI	R069066	**Plug**, Brass, block 1 5/8"	8

CYLINDER HEAD ASSEMBLY - FIGURE 2





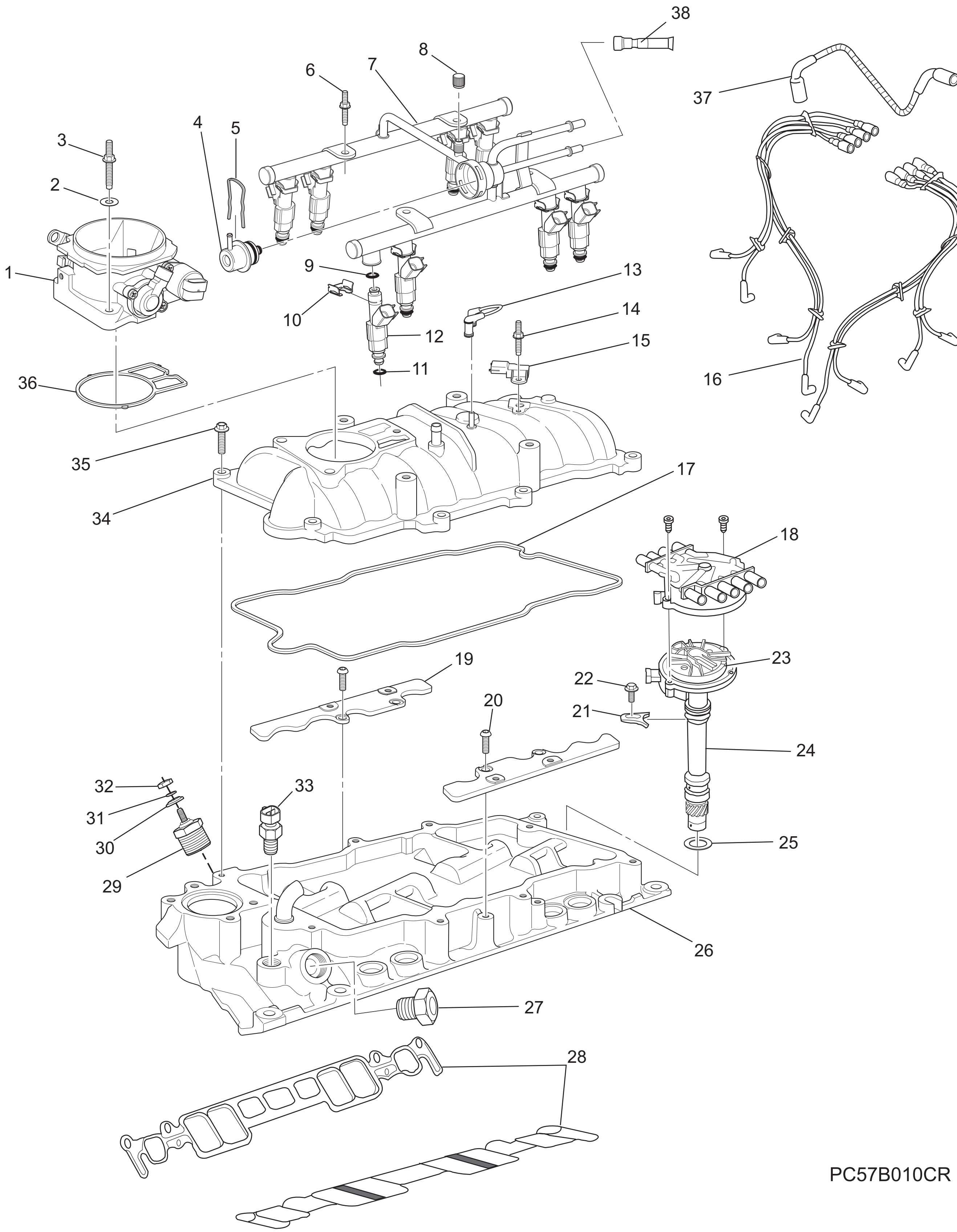
CYLINDER HEAD
BOLT POSITION

PC57B009CR

CYLINDER HEAD ASSEMBLY - FIGURE 2

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R143137	**Decal**, oil fill riser cap	1
2	R034037	**Cap**, oil fill riser	1
3	R034048	**Riser**, oil fill	1
4	R024013C	**Elbow**, breather tube	1
5	R094002	**Grommet**, breather tube elbow	1
6	R127098	**Retainer**, oil fill riser	1
7	R047228	**Grommet**, oil fill riser	1
8	R033008A	**Cover**, rocker (left side)	1
9	98009	**Washer**, rocker cover retaining bolt	8
10	7231510	**Bolt**, rocker cover retaining	8
11	R035015	**Valve**, positive crankcase ventilation	1
12	R094015	**Grommet**, pcv valve	1
13	RM0193	**Gasket**, rocker cover	2
14	R049012	**Retainer**, valve stem	32
15	R049015	**Cap**, valve spring	16
16	R046050	**Valve Spring Assembly**	16
17	R047238	**Seal**, valve stem (intake)	8
17	R047239	**Seal**, valve stem (exhaust)	8
18	R009168	**Bolt**, cylinder head to engine block (long)	14
19	7057300	**Bolt**, cylinder head to engine block (medium)	4
20	7057280	**Bolt**, cylinder head to engine block (short)	16
21	96306	**Gasket**, exhaust manifold	2
22	R030010	**Spark Plug**	8
23	R043035	**Valve**, (intake)	8
24	R043036	**Valve**, (exhaust)	8
25	RM0195	**Gasket**, cylinder head	2
26	R003007B	**Cylinder Head Assembly (5.0L)**	2
26	R003008B	**Cylinder Head Assembly (5.7L)**	2
27	R095034	**Stud**, valve rocker arm	16
27	7230920	**Stud**, valve rocker arm (.013 OS)	AR
27	R095035	**Stud**, valve rocker arm (.033 OS)	AR
28	R039023	**Push Rod**	16
29	R038015	**Rocker Arm**, valve	16
30	R038011	**Ball**, rocker arm	16
31	R017069	**Nut**, rocker arm attaching	16
32	R033008	**Cover**, rocker (right side)	1
33	R047228	**O-Ring**, oil fill riser cap	1
34	20806	**Hose**, breather	1
35	TBD	**Tube**, PCV	1
36	R0420008	**Bracket**, lift ring, front and rear	2
36	R042015	**Bracket**, lift ring (front, replaces R042008)	1
37	R042014	**Bracket**, lift ring (rear, replaces R042008)	1
38	RS0304	**Bolt**, lift ring attaching	3
39	RS2180	**Lockwasher**, lift ring attaching	3

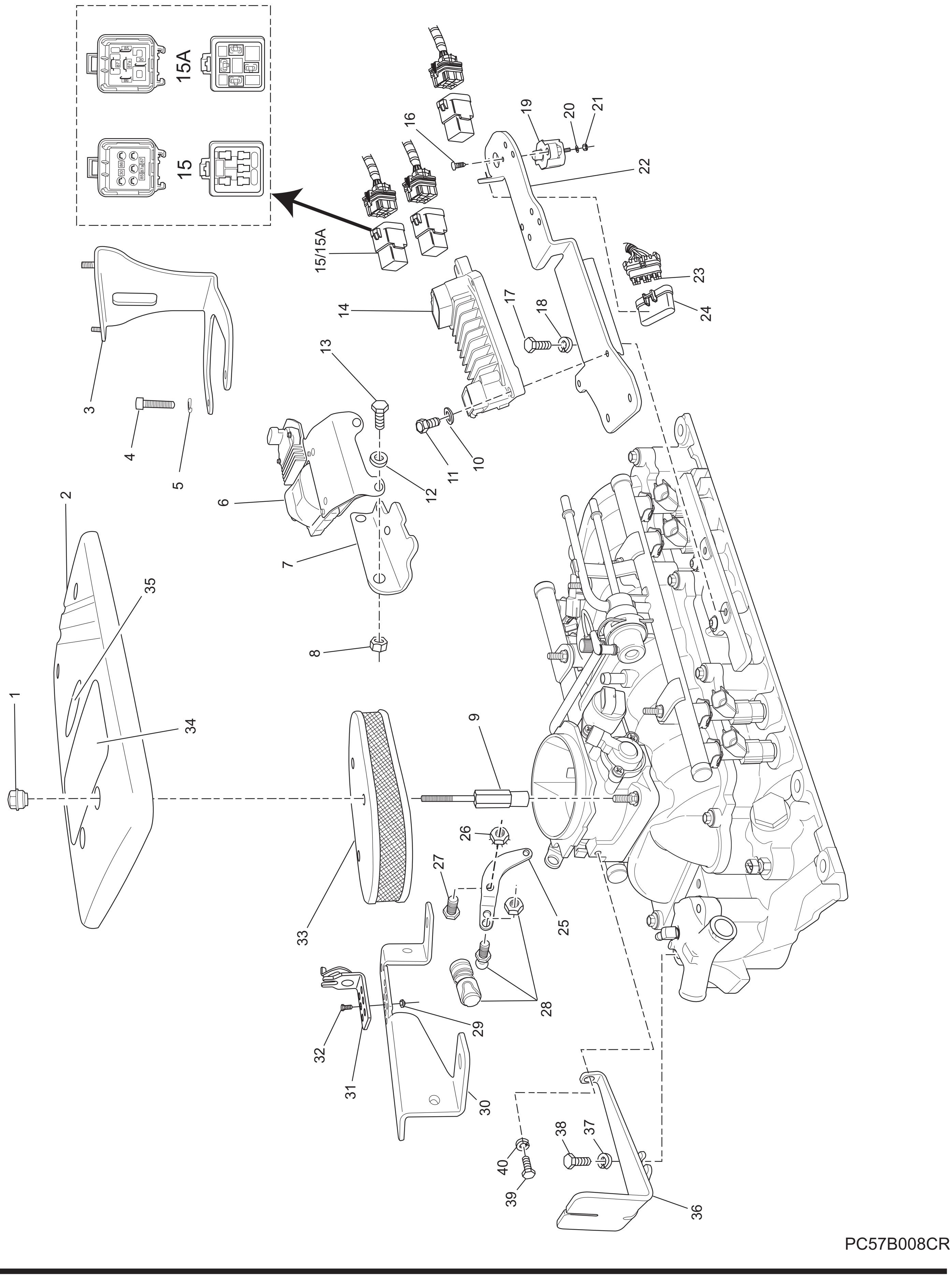
INTAKE MANIFOLD ASSEMBLY - FIGURE 3



INTAKE MANIFOLD ASSEMBLY - FIGURE 3

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035040	**Throttle Body**, mechanical throttle	1
2	NSS	**Washer**, throttle body attaching stud	3
3	R095040	**Stud**, throttle body attaching	3
4	R088002	**Regulator**, fuel pressure	1
5	TBD	**Retainer**, fuel pressure regulator	1
6	R095041	**Stud**, fuel rail attaching	4
7	RA086002	**Fuel Rail Assembly**	1
8	TBD	**Cap**, fuel pressure service port	1
9	NSS	**O-Ring**, fuel injector (top)	8
10	TBD	**Clip**, fuel injector retaining	8
11	NSS	**O-Ring**, fuel injector (bottom)	8
12	RA087007	**Fuel Injector Assembly**	8
13	R085074A	**Hose**, fuel pressure regulator vacuum	1
14	R095041	**Stud**, MAP sensor attaching	1
15	R020039	**Sensor**, manifold absolute pressure	1
16	RK120018A	**Spark Plug Wire Set**	1
16	RK120020	**Spark Plug Wire Set (5.0/5.7 RH)**	1
17	RM0271	**Gasket**, upper intake manifold to lower	1
18	RA108009	**Cap**, distributor	1
19	NSS	**Plate**, component attaching	2
20	TBD	**Bolt**, component attaching plate attaching	4
21	R127026A	**Hold Down**, distributor	1
22	R009193	**Bolt**, distributor hold down	1
23	R103011	**Rotor**, distributor	1
24	RA107044	**Distributor Assembly (LH)**	1
24	RA107045	**Distributor Assembly (RH)**	1
25	RM0123	**Gasket**, distributor assembly	1
26	R002023	**Intake Manifold**, lower	1
27	R069069	**Plug**, intake manifold	1
28	RM0250	**Gasket**, intake manifold	2
29	R020003	**Sender**, temperature (SS)	1
29	22701	**Sender**, temperature (DS)	AR
30	RS2746	**Washer**, sender terminal	1
31	RS2197	**Lockwasher**, sender terminal	1
32	RS1540	**Nut**, sender terminal	1
33	R020019	**Sensor**, engine coolant temperature	1
34	R002024	**Intake Manifold**, upper	1
35	TBD	**Bolt**, upper intake manifold to lower attaching	8
36	RM0272	**Gasket**, throttle body to upper manifold	1
37	RA120018	**Coil Wire**, Ignition (red)	1
38	RK085011	**Blockoff**, fuel line, fuel rail rtn	AR

INTAKE MANIFOLD COMPONENTS - FIGURE 4

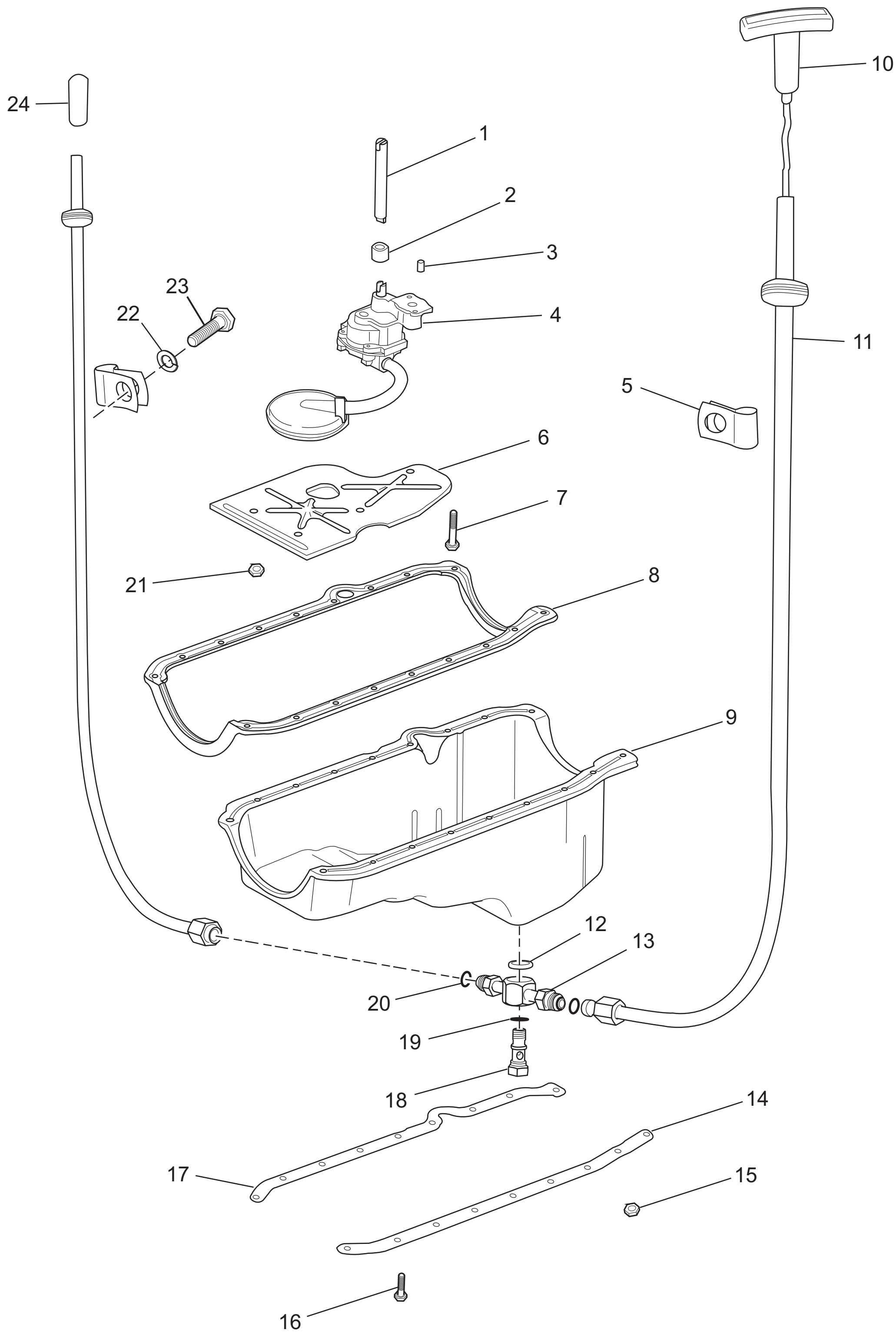


PC57B008CR

INTAKE MANIFOLD COMPONENTS - FIGURE 4

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R009194	**Nut**, engine cover attaching	4
2	R060059	**Cover**, engine	1
3	R090259	**Bracket**, engine cover mounting	1
4	RS6257	**Bolt**, engine cover bracket attaching	2
5	93920000	**Lockwasher**, engine cover bracket attaching	2
6	RA117011	**Ignition Coil/Module Assembly**	1
7	R090249	**Bracket**, ignition coil/module assembly mounting	1
8	RS2058	**Nut**, attaching	2
9	R095038	**Stud**, flame arrestor/engine cover attaching	2
10	RS2178	**Washer**, ECM attaching	2
11	90105075	**Bolt**, ECM attaching	2
12	92100000	**Washer**, attaching	2
13	RS0254	**Bolt**, attaching	2
14	R116021L cksum - 16259 (3F83)	**Engine Control Module (5.0L - LH)** (With round 10-pin boat harness connection)	AR
14	R116021B cksum - 33193 (81A9)	**Engine Control Module (5.7L - LH)** (With round 10-pin boat harness connection)	AR
14	R116021N cksum - 33641/33659	**Engine Control Module (5.7L - LH)** (8369/837B) (With16-pin boat harness connection)	AR
14	R116021E cksum - 8081 (1F91)	**Engine Control Module (5.7L - RH)** (With round 10-pin boat harness connection)	AR
15	R130012	**Relay Assembly** (refer to diagram)	3
15A	R130011A	**Relay Assembly** (refer to diagram)	3
16	RS5084	**Bolt**, circuit breaker mounting	2
17	98223016	**Bolt**, bracket attaching	2
18	93920000	**Lockwasher**, bracket attaching	2
19	R153006C	**Circuit Breaker Assembly (60 amp)**	1
NI	R143177	**Decal**, Circuit Breaker	1
20	NSS	**Washer**, circuit breaker terminal	2
21	NSS	**Nut**, circuit breaker terminal	2
22	R090250	**Bracket**, ECM/relay mounting	1
23	R153017B	**Fuses**, 20 amp	3
24	R126014	**Cover**, fuse holder	1
25	R081007	**Throttle Arm**, throttle body	1
26	RS1078	**Nut**, throttle arm attaching	2
27	RS0251	**Bolt**, throttle arm attaching	2
28	R178003	**Ball Joint Assembly**, cable attaching	1
29	RS2055	**Locking Nut**, cable clip mounting bolt	2
30	R090248	**Throttle Bracket**, intake	1
31	R090086	**Attaching Clip**, throttle cable (single)	1
32	RS5122	**Bolt**, cable clip mounting	2
33	R145025	**Flame Arrestor**	1
NI	R143090	**Decal**, flame arrestor	1
34	R143130	**Decal**, “Captain’s Choice”	1
34	R143130A	**Decal**, “Crusader Engines”	1
35	R143140	**Decal**, “5.7 MPI” silver/red	1
36	R090301	**Bracket**, degas bottle (V-Drive)	1
37	RS2179	**Lockwasher**, housing attaching	2
38	98333040	**Bolt**, thermostat housing attaching	2
39	93920000	**Bolt**, degas bottle brkt attaching	1
40	98223016	**Lockwasher**, degas bottle brkt attaching	1

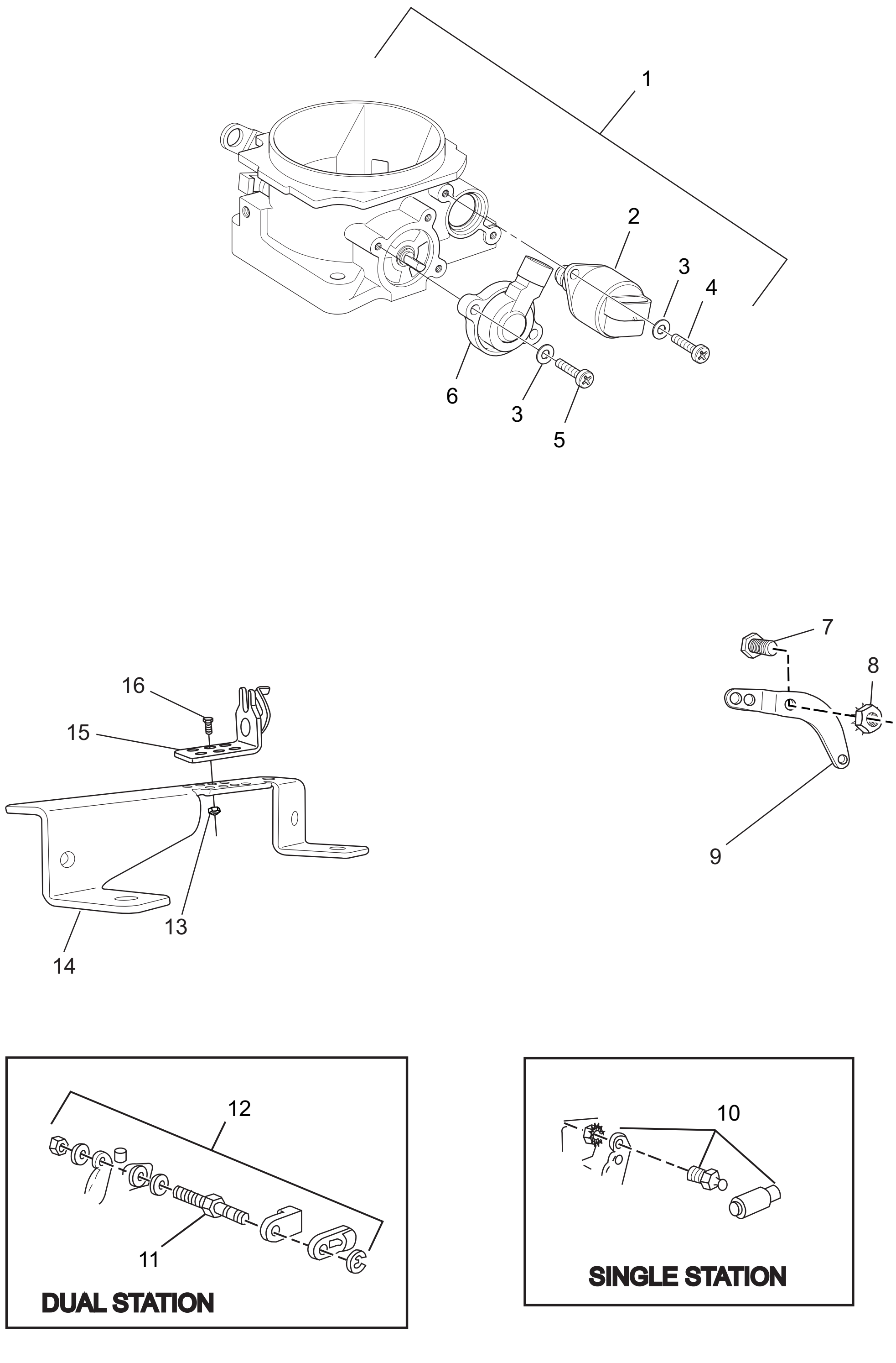
OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5



OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R058054	**Shaft**, oil pump drive	1
2	7100220	**Retainer**, oil pump drive shaft	1
3	R022022	**Pin**, oil pump locating	2
4	RA070010	**Oil Pump Assembly**	1
5	R127015	**Clamp**, strap	2
6	R012028	**Deflector**, crankshaft oil	1
7	7100250	**Bolt**, oil pump	1
8	RM0249	**Gasket**, oil pan	1
9	R005011	**Oil Pan**, stamped	1
9	97920	**Oil Pan**, cast (not shown)	1
10	R041073	**Dipstick**, oil level (0-4 degree)	1
10	R041074	**Dipstick**, oil level (12 degree)	AR
10	R041075	**Dipstick**, oil level (V-drive)	AR
11	R041078	**Tube**, oil level dipstick	2
12	23535	**O-ring**, oil pan dipstick tube fitting	1
13	98432	**Fitting**, oil pan dipstick tube	1
14	7090440	**Reinforcement**, oil pan (LH)	1
15	95200010	**Nut**, oil pan	4
16	R009157	**Bolt**, oil pan	14
17	7090450	**Reinforcement**, oil pan (RH)	1
18	98466	**Bolt**, oil pan dipstick tube fitting	1
19	NSS	**O-ring**, oil pan dipstick tube fitting bolt	1
20	NSS	**O-ring**, oil pan dipstick tube	2
21	7050360	**Nut**, crankshaft oil deflector	5
22	RS2180	**Lockwasher**, strap clamp	2
23	RS0302	**Bolt**, strap clamp	2
24	45343	**Cap**, oil pan dipstick tube	1
		“CAST OIL PAN”	
NI	RS3551	**Pipe Plug**, HX SOC Brass 3/8”, port and fwd	2
NI	30615	**Fitting**, oil pan dipstick tube, 45º, brass, stbd	1
NI	98350	**Tube**, dipstick, 0º	AR
NI	98351	**Tube**, dipstick, 4º	AR
NI	98352	**Tube**, dipstick, 12º	AR
NI	98283	**Dipstick**, oil level	1
NI	90245200	**Bolt**, oil pan, 5/16-18 X 2”, front	2
NI	90245150	**Bolt**, oil pan, 5/16-18 X 1-1/2”, rear	2
NI	RS2179	**Lockwasher**, oil pan, 5/16”	4
NI	90105175	**Bolt**, oil pan, 1/4-20 X 1-3/4”, port front	4
NI	RS0258	**Bolt**, oil pan, 1/4-20 X 1-1/2”, stbd, port rear	8
NI	RS2178	**Lockwasher**, oil pan, 1/4”	12

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

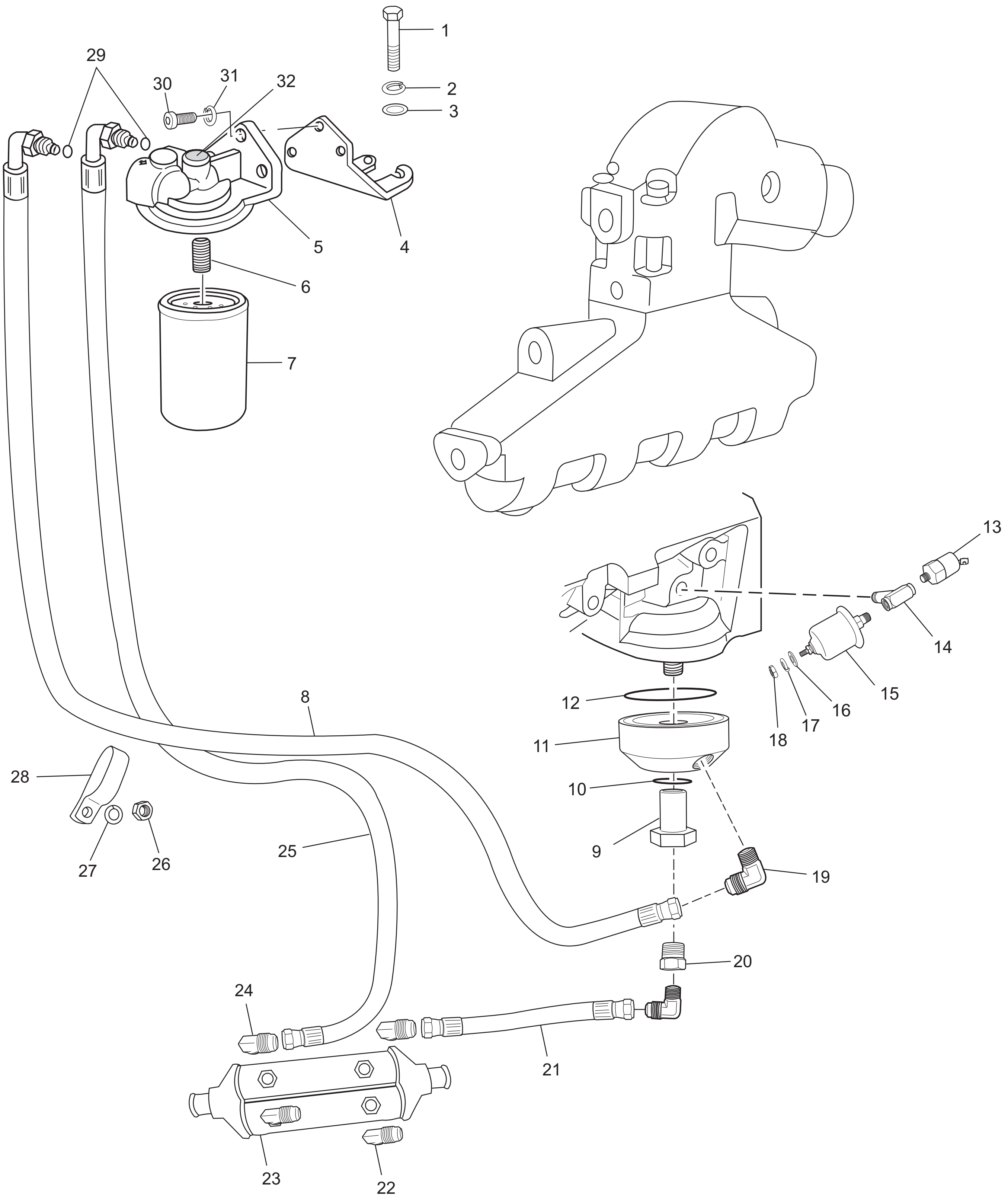


PC57B023CR

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035040	**Throttle Body Assembly**	1
2	R084003	**Valve**, idle air control	1
3	TBD	**Washer**, IAC valve/TP sensor attaching	4
4	TBD	**Screw**, IAC valve attaching	2
5	TBD	**Screw**, TP sensor attaching	2
6	R020041	**Sensor**, throttle position	1
7	RS0251	**Bolt**, throttle arm attaching	2
8	RS1078	**Nut**, throttle arm attaching	2
9	R081007	**Throttle Arm**, throttle body	1
10	R178003	**Ball Joint Assembly**, cable attaching (single)	1
11	22978	**Pivot Pin**, cable attaching (dual)	AR
12	23235	**Cable Attaching Kit**, dual	AR
13	RS2055	**Locking Nut**, cable clip mounting bolt	2
14	R090248	**Throttle Bracket**, intake	1
15	R090086	**Cable Clip**, throttle attaching (single)	1
16	RS5122	**Bolt**, cable clip mounting	2

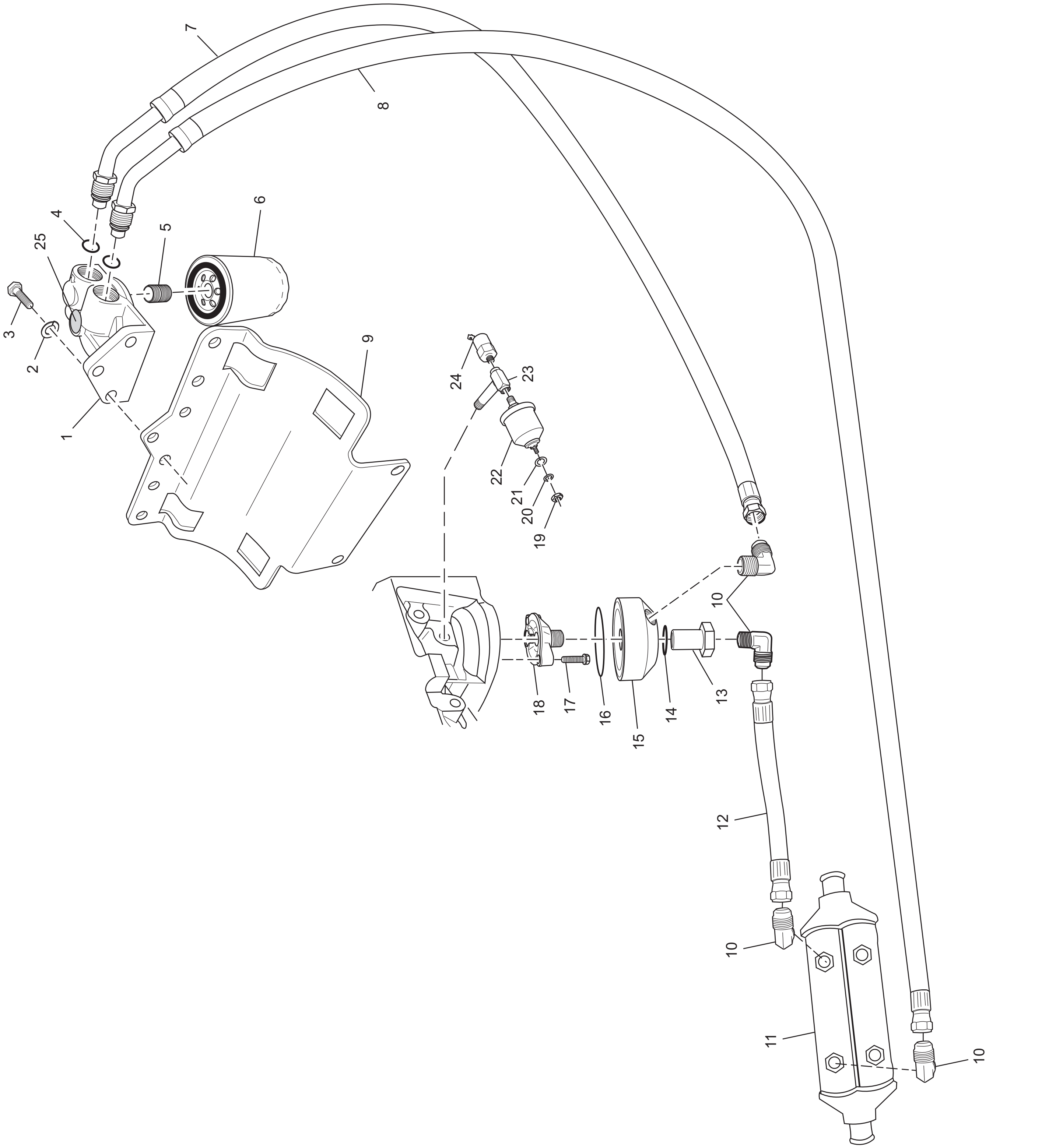
REMOTE OIL FILTER COMPONENTS (‘02-’03) - FIGURE 7



REMOTE OIL FILTER COMPONENTS (‘02-’03) - FIGURE 7

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	90305525	**Bolt**, oil filter header mounting bracket attaching	2
2	RS2180	**Lockwasher**, attaching bolt	2
3	RS2674	**Washer**, attaching bolt	2
4	R090226	**Bracket**, oil filter header mounting	1
5	R079066	**Oil Filter Header**	1
6	R024203	**Nipple**, header filter adapter	1
7	22679	**Filter**, oil	1
8	RA045120D	**Hose Assembly**, bypass adapter to filter header	1
9	R017073	**Fitting**, oil bypass adapter attaching	1
10	R047202	**O-ring**, oil bypass adapter attaching fitting	1
11	R079051	**Adapter**, oil bypass	1
12	R047203	**O-ring**, oil bypass adapter	1
13	R020015A	**Switch**, oil pressure	1
14	R024205	**Tee**, sender attaching	1
15	R020001	**Sender**, oil pressure	1
16	RS2746	**Washer**, sender terminal	1
17	RS2197	**Lockwasher**, sender terminal	1
18	RS1540	**Nut**, sender terminal	1
19	R024184	**Fitting**, 90 degree	2
20	R024182	**Fitting**, adapter	1
21	RA045103D	**Hose Assembly**, oil cooler to bypass adapter	1
22	R024010	**Fitting**, 90 degree	2
23	R147035	**Cooler**, dual, oil/transmission	1
24	R024184	**Fitting**, 90 degree	2
25	RA045120D	**Hose Assembly**, filter header to oil cooler	1
26	RS1028	**Nut**, strap clamp attaching	1
27	RS2180	**Lockwasher**, strap clamp attaching	1
28	R127099	**Clamp**, strap	3
29	R047245	**O-Ring**, oil line	2
30	99333020	**Bolt**, oil filter header mounting	3
31	RS2179	**Lockwasher**, oil filter header mounting bolt	3
32	R143175	**Decal**, “Caution Hot”	1

REMOTE OIL FILTER COMPONENTS (‘04) - FIGURE 8

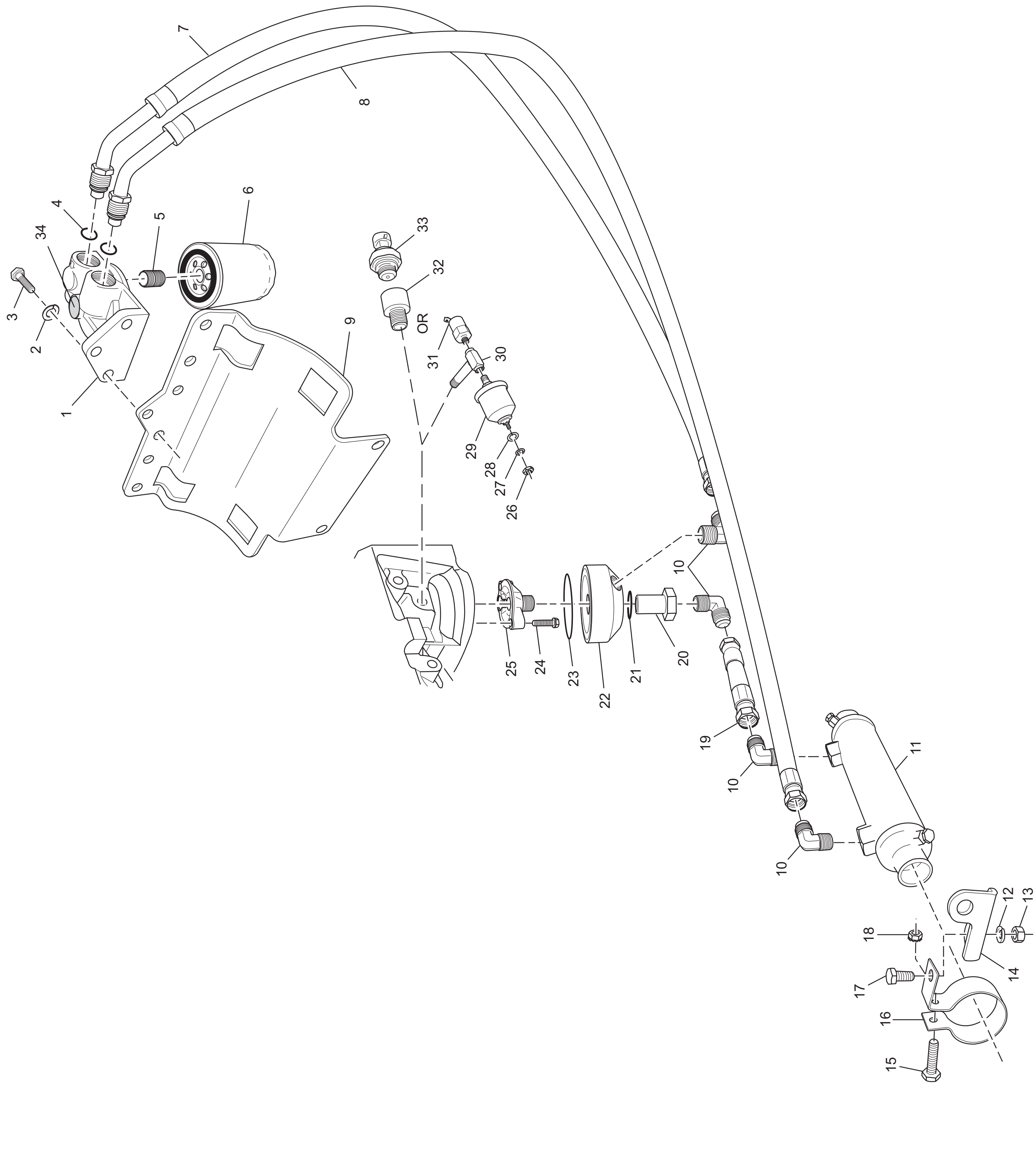


PC57B020CR_04

REMOTE OIL FILTER COMPONENTS (‘04) - FIGURE 8

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R079066	**Oil Filter Header**	1
2	RS2179	**Lockwasher**, header mounting to brkt	3
3	RS0280	**Bolt**, header mounting to brkt	3
4	R047245	**O-Ring**, oil line	2
5	R024203	**Nipple**, header filter adapter	1
6	22679	**Filter**, oil	1
7	RA045155	**Hose**, oil, adapter to remote oil filter	1
8	RA045155A	**Hose Assembly**, filter header to bypass adapter	1
9	R090258	**Bracket**, ROF header mounting	1
10	R024184	**Fitting**, 5/8SAE X 1/2NPT, 90 degree	2
11	R147035	**Cooler, dual,** oil/transmission	1
12	RA045103D	**Hose Assembly**, cooler to bypass adapter	1
13	R017073	**Bolt**, oil bypass adapter	1
14	R047203	**O-ring**, small	1
15	R079051	**Adapter**, oil bypass adapter	1
16	R047202	**O-ring**, large	1
17	R009089	**Bolt**, oil adapter	2
18	RA079028	**Adapter**, oil	1
19	RS1540	**Nut**, sender terminal	1
20	RS2197	**Lockwasher**, sender terminal	1
21	RS2746	**Washer**, sender terminal	1
22	R020001	**Sender**, oil pressure	1
23	R024205	**Tee**, sender attaching	1
24	R020015A	**Switch**, oil pressure	1
25	R143175	**Decal**, “Caution Hot”	1

REMOTE OIL FILTER COMPONENTS ('05) - FIGURE 9

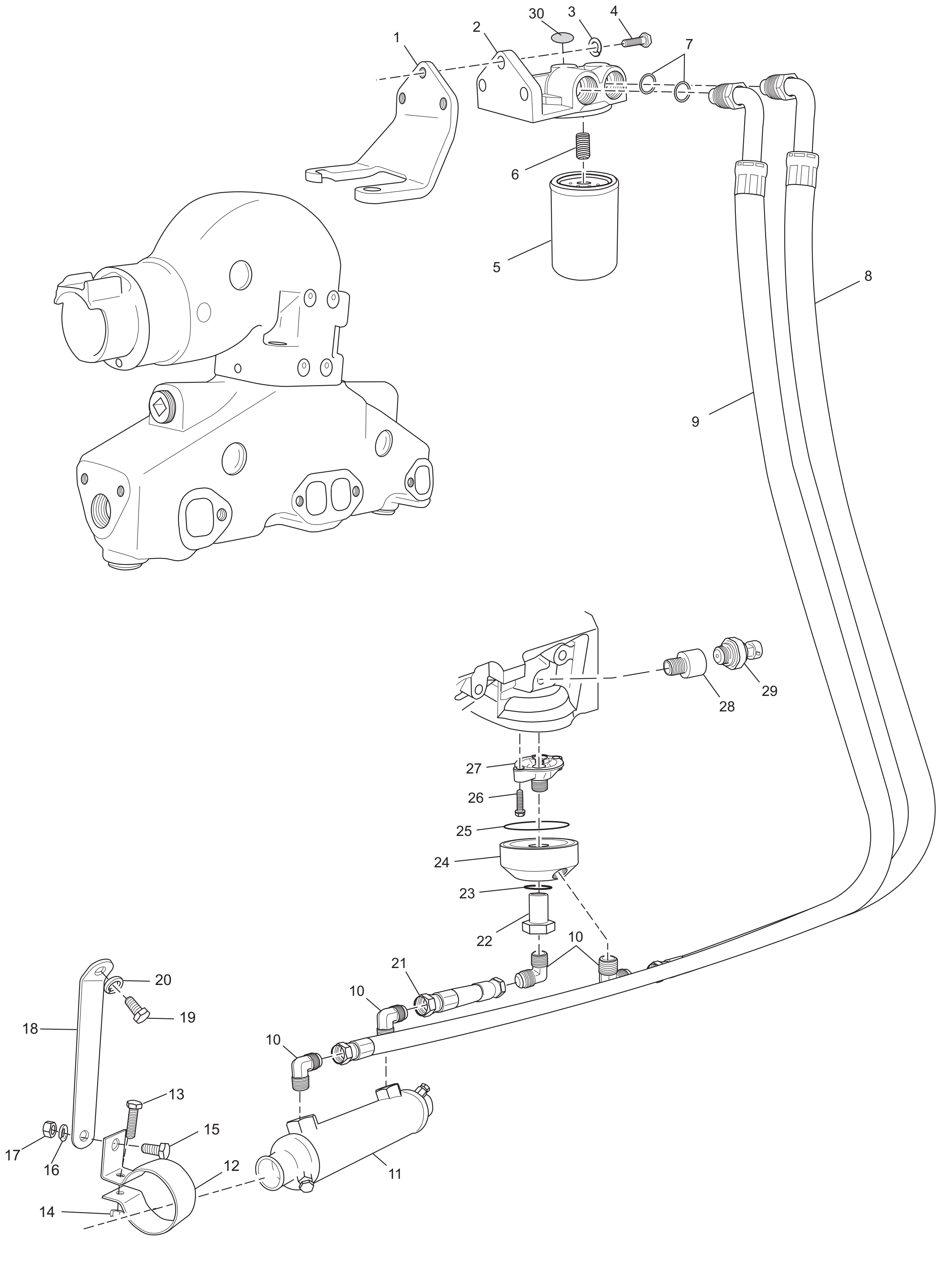


PC57B020CR_05

REMOTE OIL FILTER COMPONENTS (‘05) - FIGURE 9

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R079066	**Oil Filter Header**	1
2	RS2179	**Lockwasher**, header mounting to brkt	3
3	RS0280	**Bolt**, header mounting to brkt	3
4	R047245	**O-Ring**, oil line	2
5	R024203	**Nipple**, header filter adapter	1
6	22679	**Filter**, oil	1
7	RA045155B	**Hose Assembly**, filter header to bypass adapter	1
8	RA045155A	**Hose Assembly**, cooler to filter header	1
9	R090258	**Bracket**, ROF header mounting	1
10	R024184	**Fitting**, 5/8SAE X 1/2NPT, 90 degree	2
11	R147049	**Cooler,** oil	1
12	RS2180	**Lockwasher,** oil cooler attaching	1
13	RS1028	**Nut,** oil cooler attaching	1
14	R090013A	**Bracket,** oil cooler attaching	1
15	RS0256	**Bolt,** oil cooler mounting	1
16	R090010	**Bracket,** oil cooler mounting	1
17	RS0302	**Bolt,** oil cooler attaching	1
18	RS2058	**Nut,** oil cooler mounting	1
19	RA045103D	**Hose Assembly**, cooler to bypass adapter	1
20	R017073	**Bolt**, oil bypass adapter	1
21	R047203	**O-ring**, small	1
22	R079051	**Adapter**, oil bypass adapter	1
23	R047202	**O-ring**, large	1
24	R009089	**Bolt**, oil adapter	2
25	RA079028	**Adapter**, oil	1
26	RS1540	**Nut**, sender terminal	1
27	RS2197	**Lockwasher**, sender terminal	1
28	RS2746	**Washer**, sender terminal	1
29	R020001	**Sender**, oil pressure	1
30	R024205	**Tee**, sender attaching	1
31	R020015A	**Switch**, oil pressure	1
32	R024223	**Adapter**, CAN BUS oil pressure sensor	AR
33	R020048	**Sensor**, CAN BUS oil pressure	AR
34	R143175	**Decal**, “Caution Hot”	1

OPTIONAL REMOTE OIL FILTER COMPONENTS (‘05) - FIGURE 10

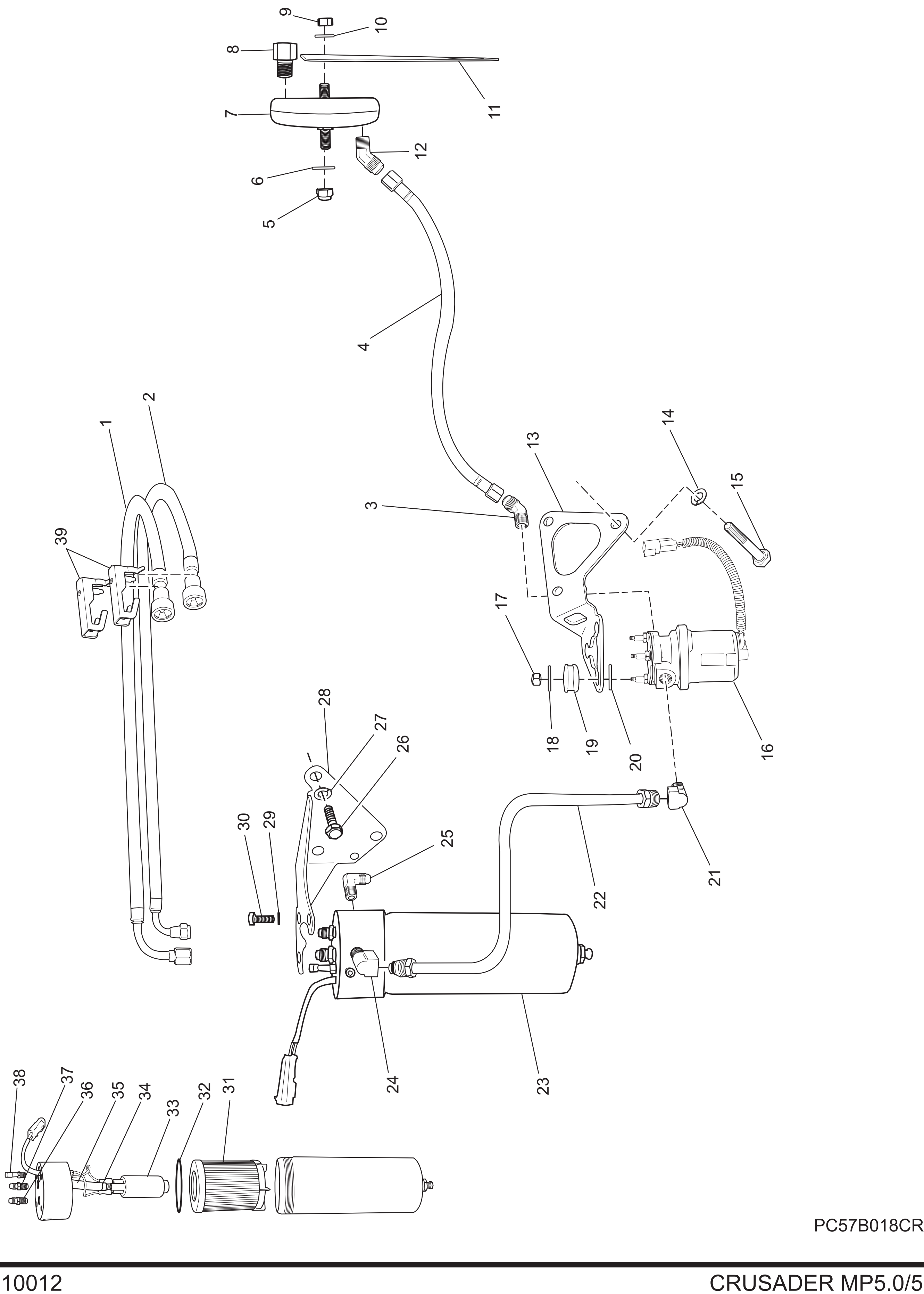


PC57B020CR_05a

OPTIONAL REMOTE OIL FILTER COMPONENTS (‘05) - FIGURE 10

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090226	**Bracket**, ROF header mounting	1
2	R079066	**Oil Filter Header**	1
3	RS2179	**Lockwasher**, header mounting to brkt	3
4	RS0280	**Bolt**, header mounting to brkt	3
5	R047245	**O-Ring**, oil line	2
6	R024203	**Nipple**, header filter adapter	1
7	22679	**Filter**, oil	1
8	RA045120D	**Hose Assembly**, filter header to bypass adapter	1
9	RA045120B	**Hose Assembly**, cooler to filter header	1
10	R024184	**Fitting**, 5/8SAE X 1/2NPT, 90 degree	2
11	R147049	**Cooler,** oil	1
12	R090010	**Clamp**, oil cooler	1
13	RS0256	**Bolt**, oil cooler clamp	1
14	RS2058	**Nut,** oil cooler clamp	1
15	90318275	**Bolt,** oil cooler clamp to bracket attaching	1
16	9330000	**Lockwasher**, oil cooler clamp to bracket attaching	1
17	95310300	**Nut,** oil cooler clamp to bracket attaching	1
18	R090233A	**Bracket**, oil cooler attaching	1
19	98443025	**Bolt,** bracket attaching	1
20	93940000	**Lockwasher**, bracket attaching	1
21	RA045103D	**Hose Assembly**, cooler to bypass adapter	1
22	R017073	**Bolt**, oil bypass adapter	1
23	R047203	**O-ring**, small	1
24	R079051	**Adapter**, oil bypass adapter	1
25	R047202	**O-ring**, large	1
26	R009089	**Bolt**, oil adapter	2
27	RA079028	**Adapter**, oil	1
28	R024223	**Adapter**, CAN BUS oil pressure sensor	1
29	R020048	**Sensor**, CAN BUS oil pressure	1
30	R143175	**Decal**, “Caution Hot”	1

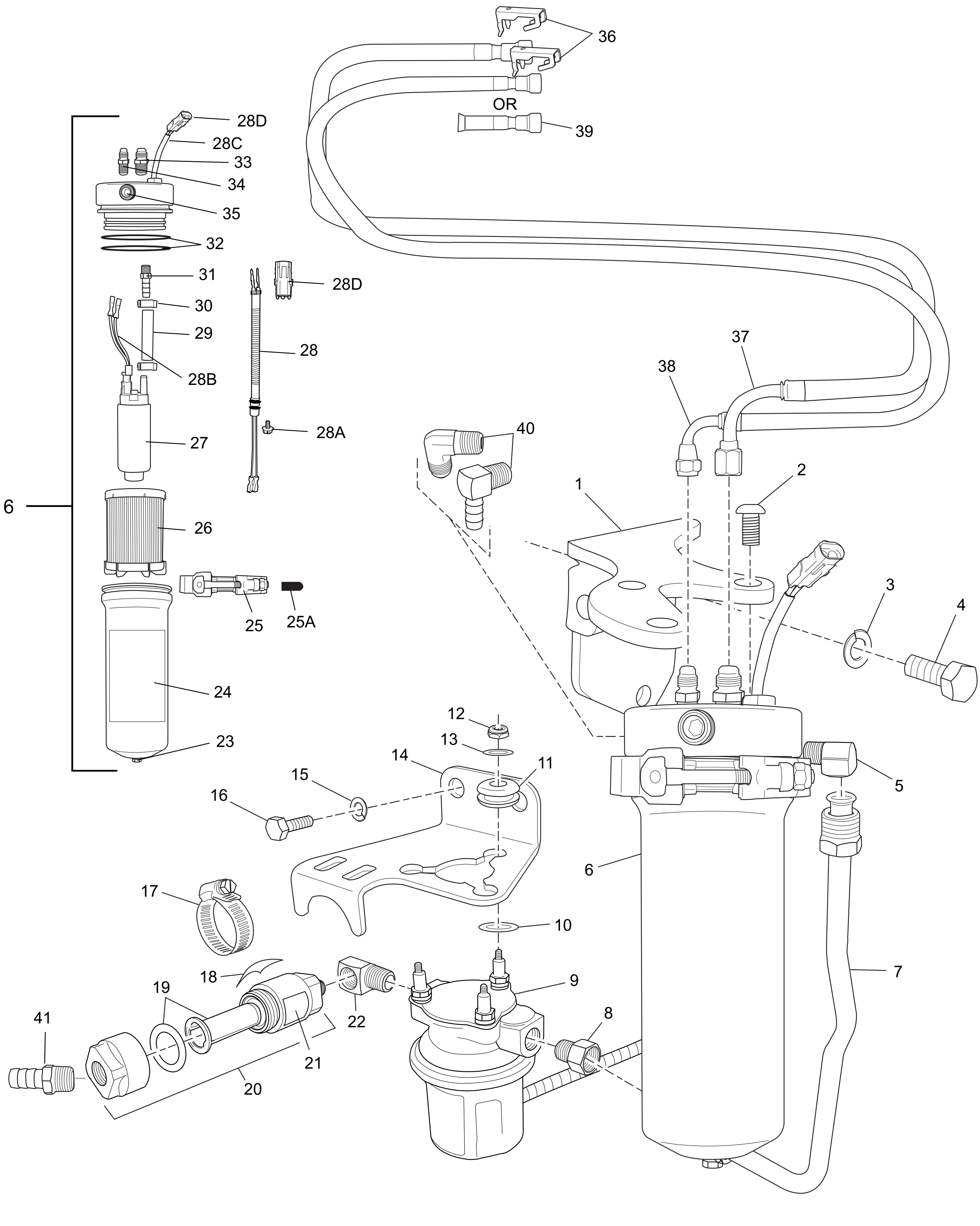
FUEL CONTROL CELL (FCC) COMPONENTS ('02-'04) - FIGURE 11



FUEL CONTROL CELL (FCC) COMPONENTS (‘02-’04) - FIGURE 11

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA085090A	**Hose Assembly**, FCC to fuel rail (inlet)	1
2	RA085091A	**Hose Assembly**, fuel rail to FCC (return)	1
3	R024197	**Fitting**, 45 degree	1
4	RA085071	**Hose Assembly**, filter to low-pressure pump	1
5	TBD	**Locking Nut**, fuel filter	1
6	RS2675	**Washer**, fuel filter	1
7	RA077013	**Filter Assembly**, fuel	1
NI	R077013	**Filter Screen**, 115 micron	1
8	R024196	**Fitting**, fuel inlet	1
9	RS1529	**Nut**, fuel filter mounting	1
10	RS2181	**Washer**, fuel filter mounting	1
11	R090239	**Bracket**, fuel filter mounting	1
12	R024197	**Fitting**, 45 degree	1
13	R090223	**Bracket**, low-pressure fuel pump mounting	1
14	RS2180	**Lockwasher**, bracket mounting	3
15	RS0305	**Bolt**, bracket mounting	3
16	RA080018	**Fuel Pump**, low-pressure	1
17	RS1521L	**Locking Nut**, low-pressure fuel pump	3
18	R096142	**Washer**, fuel pump mounting	3
19	R094035A	**Grommet**, mounting bracket	3
20	R096141	**Washer**, fuel pump mounting	3
21	R024017	**Fitting**, 90 degree	1
22	RA085096	**Hose Assembly**, low-pressure pump to FCC	1
23	RA080025	**Fuel Control Cell Assembly**	1
24	R024017	**Fitting**, 90 degree	1
25	R024076	**Fitting**, 90 degree	1
26	RS0304	**Bolt**, FCC mounting bracket	3
27	RS2180	**Lockwasher**, FCC mounting bracket	3
28	R090179B	**Bracket**, FCC mounting	1
29	RS2180	**Lockwasher**, FCC mounting	3
30	RS0302	**Bolt**, FCC mounting	3
31	RP080026	**Fuel Filter & O-Ring**, FCC assembly	1
32	R047214	**O’Ring**, FCC seal	1
33	RA080025A	**Fuel Pump**, high pressure	1
34	R127087	**Clamp**, Oeticker	2
35	R045098	**Hose**, 5/16 I.D. - 1/2 O.D.	1
36	R024175	**Fitting**, fuel line	1
37	R024163A	**Fitting**, fuel line	1
38	R035031	**Fitting**, fuel pressure, Schrader valve	1
39	R127100	**Retainer**, fuel line	2
NI	R034041	**Cap**, Schrader valve	1

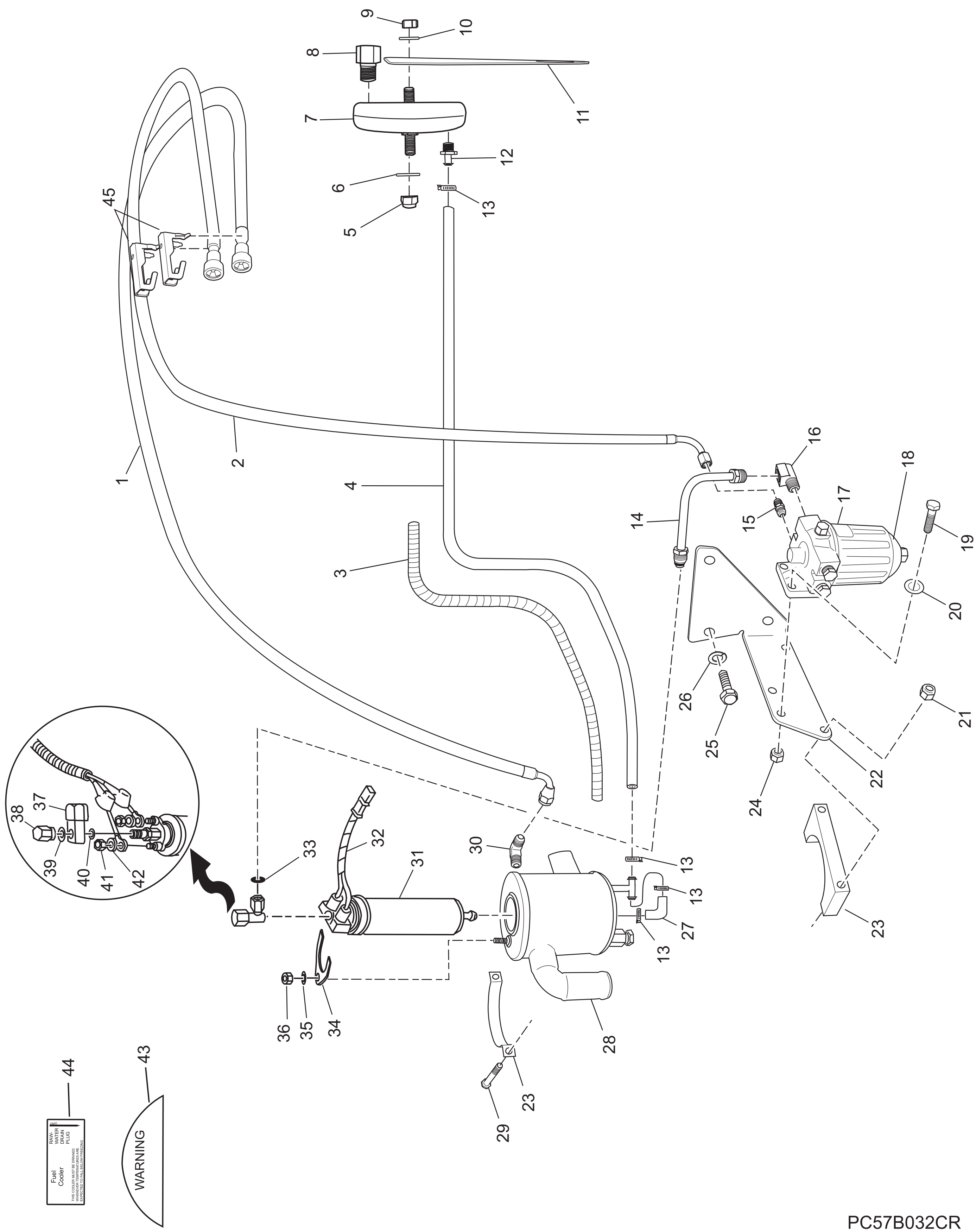
FUEL CONTROL CELL (FCC) COMPONENTS (‘05) - FIGURE 12



FUEL CONTROL CELL (FCC) COMPONENTS (‘05) - FIGURE 12

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090179	**Bracket**, FCC mounting	1
2	90384075	**Bolt**, FCC mounting	3
3	RS2180	**Lockwasher**, FCC mounting bracket	2
4	RS0304	**Bolt**, FCC mounting bracket	2
5	R024017	**Fitting**, 90 degree	1
6	RA080031	**Fuel Control Cell Assembly**	1
7	RA085096A	**Fuel Line**, low-pressure pump to FCC	1
8	R024146	**Adapter**, fuel line fitting	1
9	RA080018	**Fuel Pump**, low-pressure	1
10	R096141	**Washer**, fuel pump mounting	3
11	R094035A	**Grommet**, mounting bracket	3
12	RS1521L	**Locking Nut**, low-pressure fuel pump	3
13	R096142	**Washer**, fuel pump mounting	3
14	R090308	**Bracket**, low-pressure fuel pump mounting	1
15	RS2180	**Lockwasher**, bracket mounting	2
16	RS0302	**Bolt**, bracket mounting	2
17	RS3858	**Clamp**, prefilter retaining	1
18	R094040	**Adhesive**, rubber strip	1
19	RP077014	**Gasket/Filter Kit**, prefilter	1
20	RA077014	**Prefilter Assembly**	1
21	R143174	**Decal**, prefilter	1
22	R024192	**Fitting**, 90 degree	1
23	RS3554	**Plug**, FCC drain	1
24	R143112A	**Decal**, FCC	1
25	R171010	**Clamp**, FCC bowl-to-head retaining	1
25A	R128002	**Cover**, FCC clamp T-bolt	1
26	R080026	**Filter**, FCC	1
27	RA080025A	**Pump**, FCC high pressure fuel	1
28	R121085B	**Harness**, 1 piece, FCC high pressure fuel pump (1-piece harness <u>**does not**</u> retrofit for 2-piece)	1
28A	91620025	**Screw**, self-tapping, 1 piece harness retaining	1
28B	RA121061	**Harness**, 2 piece, FCC high pressure fuel pump	1
28C	RA121060	**Harness**, 2 piece, FCC high pressure fuel pump	1
28D	7172040	**Connector**, W/P 2-Way Female	1
29	R045098B	**Hose**, FCC internal fuel	1
30	R127087	**Clamp**, Oeticker	2
31	R024219	**Fitting**, FCC internal	1
32	R047241	**O’Ring**, FCC bowl-to-head seal	2
33	R024175	**Fitting**, FCC head (fuel supply line)	1
34	R024163A	**Fitting**, FCC head (fuel return line)	1
36	R127100	**Retainer**, fuel line	2
37	RA085090A	**Hose Assembly**, FCC to fuel rail (inlet)	1
38	RA085091A	**Hose Assembly**, fuel rail to FCC (return)	AR
39	RK085011	**Blockoff**, fuel line, fuel rail rtn to FCC	AR
40	R024225	**Fitting**, return line 90 degree barb	AR
40	R024224	**Fitting**, return line 90 degree SAE	AR
41	R024218	**Fitting**, fuel inlet, 3/8 NPT X 1/2 hose barb	1

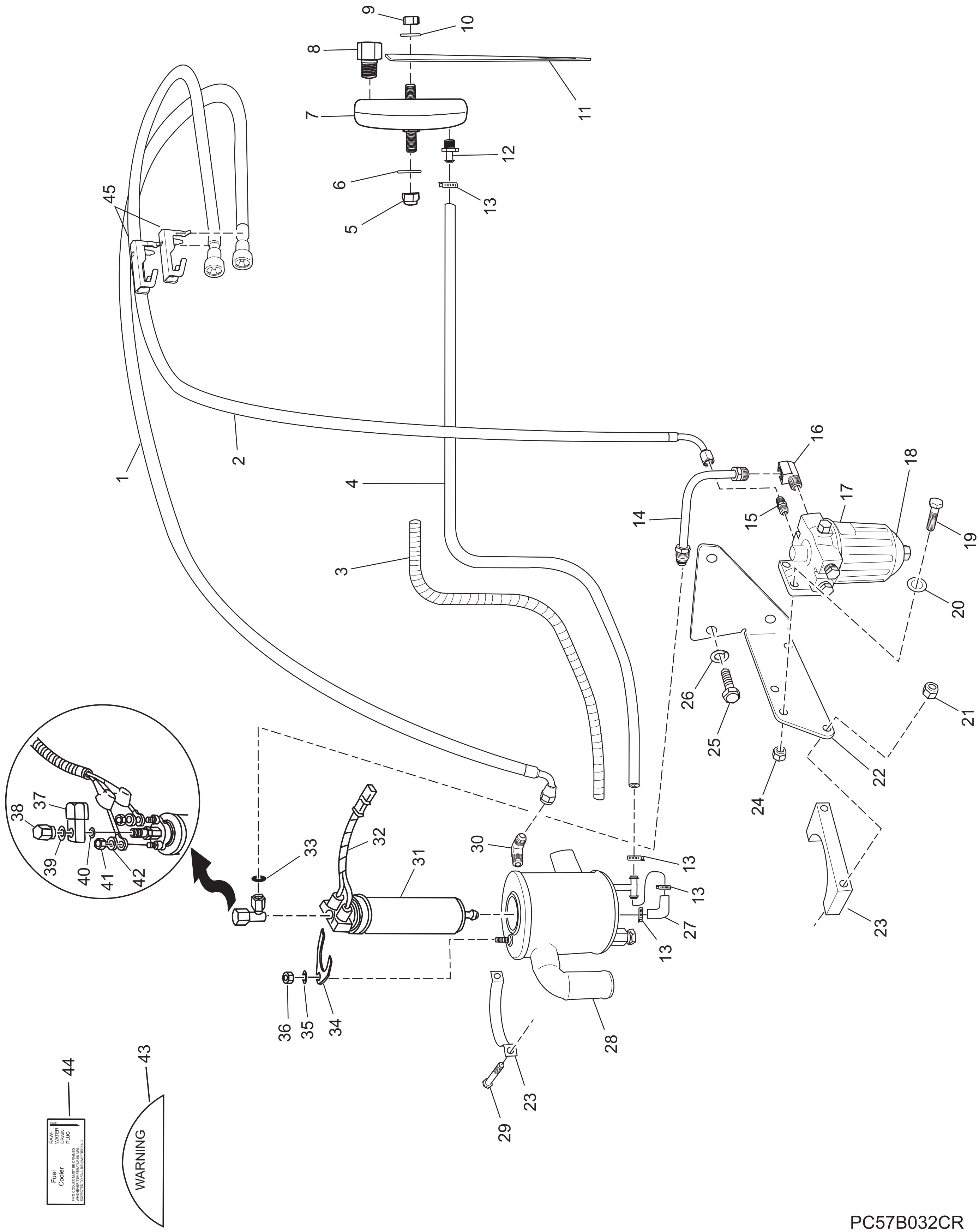
OLD RETURNLESS FUEL SYSTEM COMPONENTS- FIGURE 13 (thru S/N 630209)



OLD RETURNLESS FUEL SYSTEM COMPONENTS- FIGURE 13 (thru S/N 630209)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA085091A	**Fuel Line Assembly**, fuel rail to fuel cooler	1
2	RA085090A	**Fuel Line Assembly**, filter to fuel rail	1
3	47064	**Conduit**, protective	1
4	98431	**Fuel Line Assembly**, filter to fuel pump	1
5	TBD	**Locking Nut**, fuel filter	1
6	RS2675	**Washer**, fuel filter	1
7	RA077013	**Filter Assembly**, fuel	1
NI	R077013	**Filter Screen**, 115 micron	1
8	R024196	**Fitting**, fuel inlet	1
9	RS1529	**Nut**, fuel filter mounting	1
10	RS2181	**Washer**, fuel filter mounting	1
11	R090239	**Bracket**, fuel filter mounting	1
12	R024218	**Fitting**, fuel outlet	1
13	RS3864	**Clamp**, fuel line	4
14	RA085097	**Fuel Line Assembly**, fuel pump to filter	1
15	R024163A	**Fitting**, straight adapter	1
16	R024017	**Fitting**, 90 degree	1
17	47046	**Fuel Filter**, racor water separating	1
18	47047	**Element**, racor fuel filter (not shown)	1
19	RS0282	**Bolt**, filter mounting	2
20	92200000	**Washer**, mounting bolt	2
21	95310300	**Locking Nut**, fuel cooler mounting	2
22	R090256	**Bracket**, fuel cooler/filter mounting	1
23	23554	**Retainer**, fuel cooler rubber	1
24	RS2060	**Nut**, mounting bolt	2
25	RS0302	**Bolt**, fuel cooler/filter bracket mounting	3
26	RS2180	**Lockwasher**, mounting bolt	3
27	49041	**Fuel Line Assembly**, 90 degree elbow	1
28	RA147045	**Fuel Cooler Assembly**	1
29	90318325	**Bolt**, fuel cooler mounting	2
30	R024163	**Fitting**, 90 degree	1
31	47039	**Electric Fuel Pump Assembly**	1
32	49038	**Wire Harness**, fuel pump to engine harness	1
33	22800	**O-Ring**, fuel line assembly	2
34	98642	**Retainer**, fuel pump	1
35	NSS	**Starwasher**, retaining nut	1

OLD RETURNLESS FUEL SYSTEM COMPONENTS- FIGURE 13 (cont'd) (thru S/N 630209)

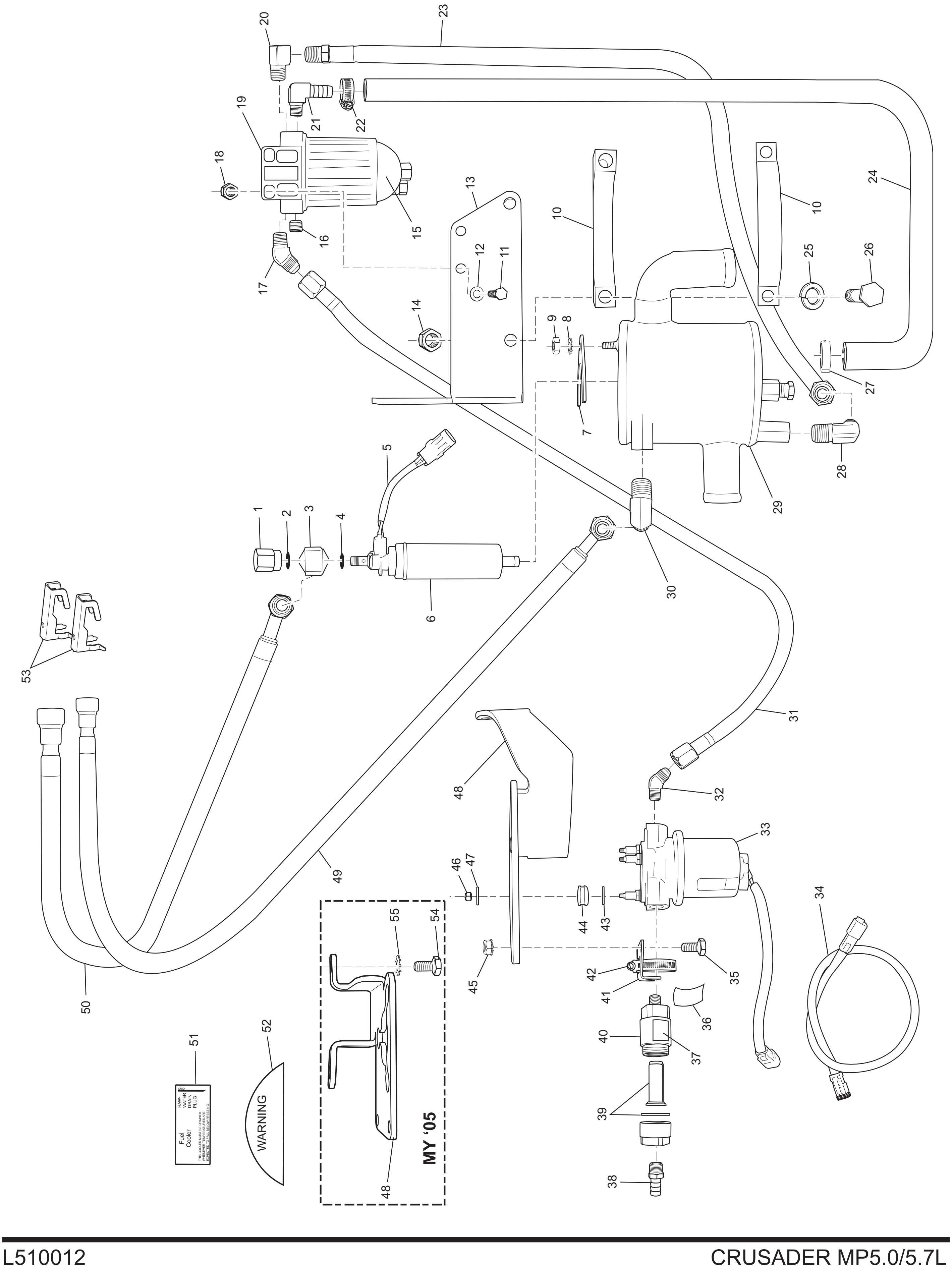


PC57B032CR

OLD RETURNLESS FUEL SYSTEM COMPONENTS- FIGURE 13 (cont'd) (thru S/N 630209)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
36	RS1078	**Nut**, w/lockwasher fuel pump retainer attaching (RS1078 replaces items 35 and 36)	1
37	98440	**Fitting**, fuel line to fuel pump	1
38	98442	**Nut**, fitting to fuel pump	1
39	23515	**O-Ring**, fuel pump sealing (small)	1
40	23516	**O-Ring**, fuel pump sealing (large)	1
41	NSS	**Nut**, wire retaining	2
42	NSS	**Lockwasher**, retaining nut	2
43	23649	**Decal**, fuel system warning	1
44	23654	**Decal**, fuel cooler system warning	1
45	R127100	**Retainer**, fuel line	2

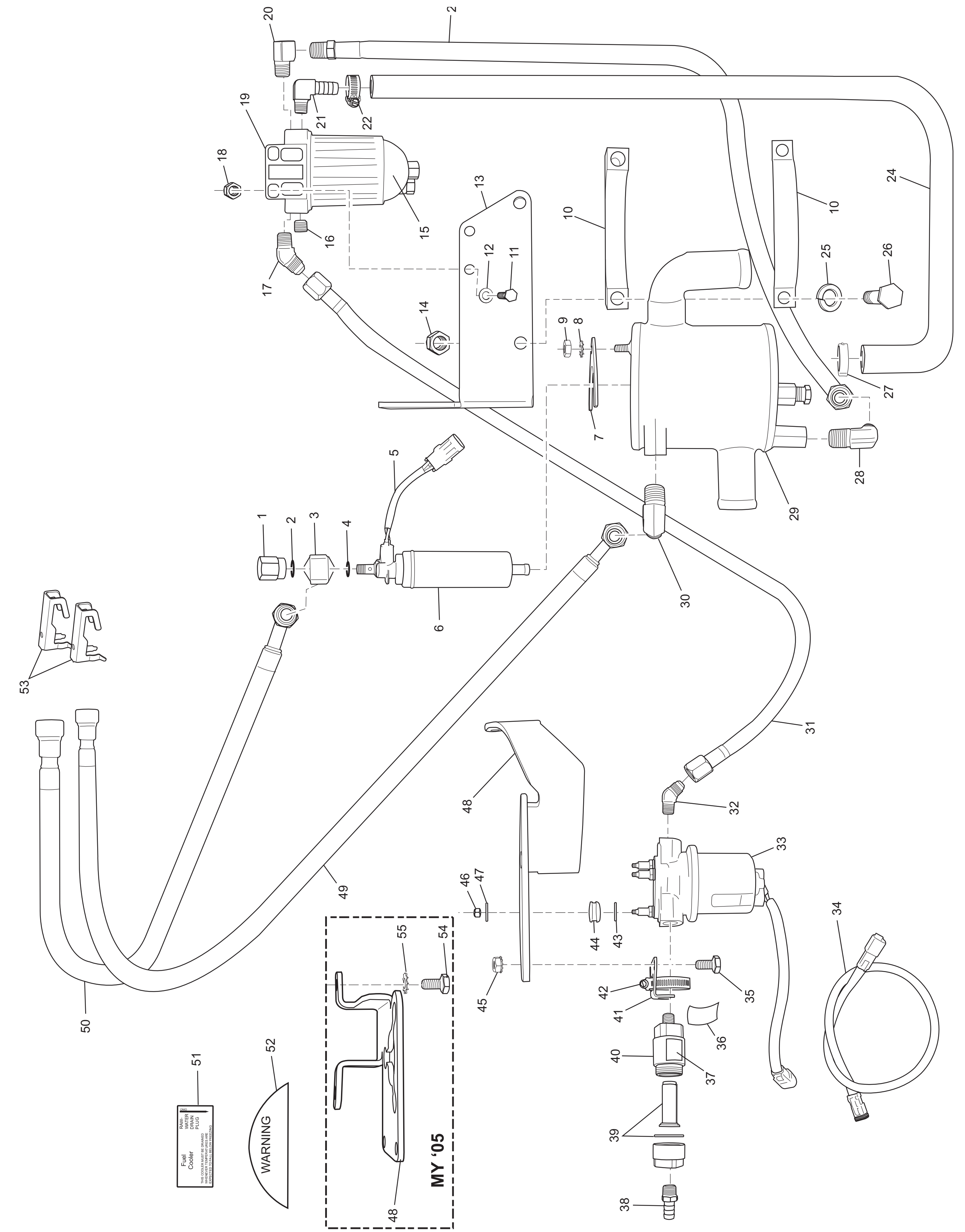
NEW RETURNLESS FUEL SYSTEM COMPONENTS- FIGURE 14 (S/N 630210 thru present)



NEW RETURNLESS FUEL SYSTEM COMPONENTS- FIGURE 14 (S/N 630210 thru present)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	98442	**Nut**, fitting to fuel pump	1
2	23516	**O-ring**, fuel fitting sealing	1
3	98440	**Fitting**, fuel line to fuel pump	1
4	23515	**O-ring**, fuel fitting sealing	1
5	49038	**Harness**, fuel pump	1
6	47039	**Electric Fuel Pump Assembly**	1
7	98642	**Retainer**, fuel pump	1
8	NSS	**Starwasher**, retaining nut	1
9	RS1078	**Nut**, w/lockwasher fuel pump retainer attaching (RS1078 replaces items 8 and 9)	1
10	23554	**Retainer**, fuel cooler mounting	1
11	RS0282	**Bolt**, racor filter mounting	2
12	92200000	**Flatwasher**, racor filter mounting	2
13	R090256	**Bracket**, fuel cooler/racor filter	1
14	95310300	**Nut** attaching	2
15	47047	**Element**, racor fuel filter (not shown)	1
16	RS3550	**Fitting**, blockoff	1
17	R024197	**Fitting**, 45 degree	1
18	RS2060	**Nut**, racor filter locking	2
19	47046	**Fuel Filter**, racor water separating	1
20	R024192	**Fitting**, 90 degree	1
21	R024207	**Fitting**, 90 degree	1
22	RS3864	**Clamp**,	1
23	RA085070	**Fuel Line Assembly**, fuel cooler to racor filter	1
24	98431	**Fuel Line Assembly**, racor filter to high pressure fuel pump	1
NS	47064	**Loom**, (not shown)	1
25	RS2180	**Lockwasher**, fuel cooler mounting	2
26	90318325	**Bolt**, fuel cooler mounting	2
27	R127087E	**Clamp**, crimp	1
28	R024163	**Fitting**, 90 degree	1
29	RA147045A	**Fuel Cooler Assembly**	1
29	RA147045B	**Fuel Cooler Assembly** (‘05)	1
30	R024204	**Fitting**, 90 degree	1
31	RA085071B	**Fuel Line Assembly**, L.P. fuel pump to racor filter	1
32	R024197	**Fitting**, 45 degree	1
33	RA080018	**Fuel Pump**, low-pressure	1
34	R121077	**Jumper Harness**, low-pressure fuel pump	1

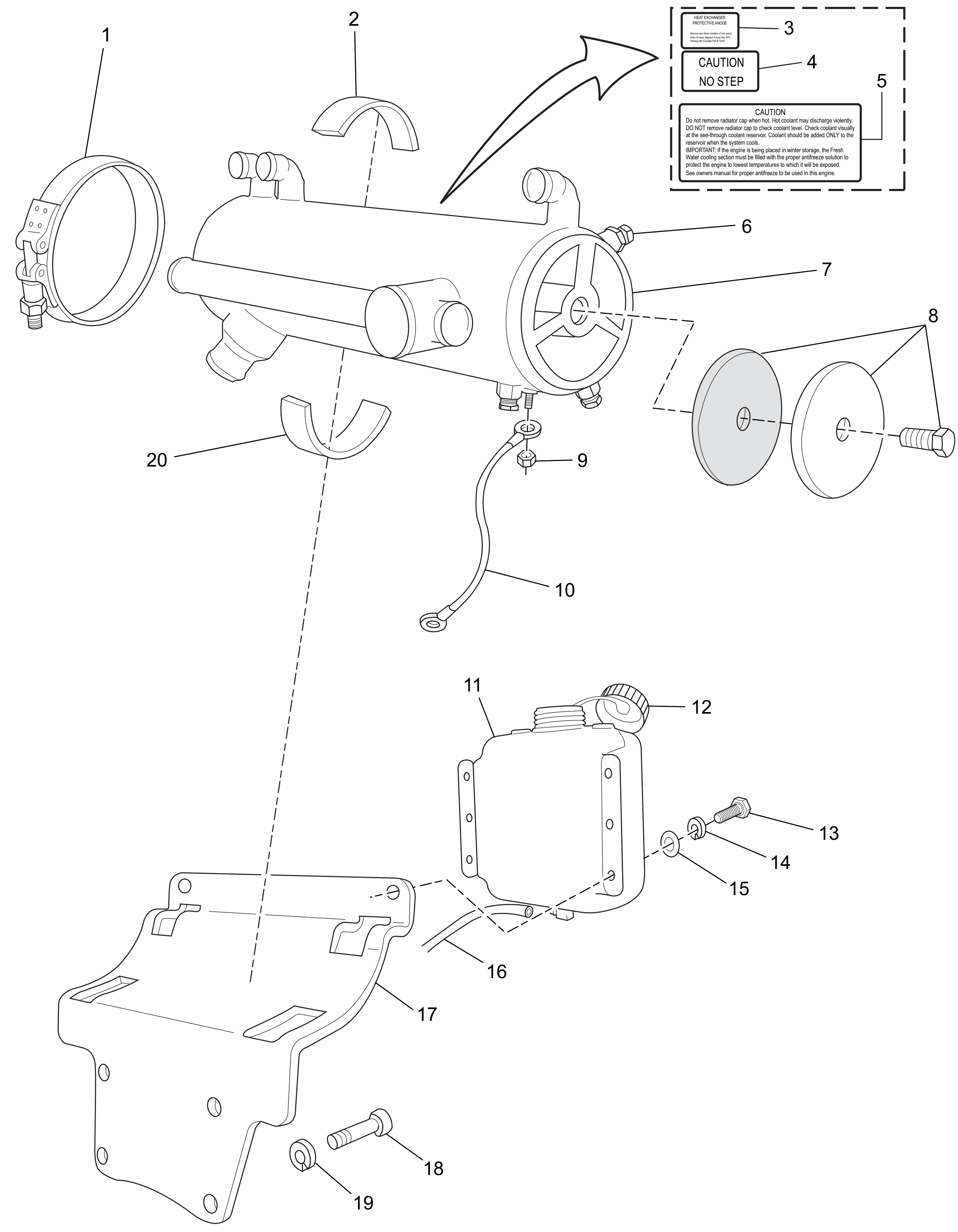
NEW RETURNLESS FUEL SYSTEM COMPONENTS - FIGURE 14 (cont'd) (S/N 630210 thru present)



NEW RETURNLESS FUEL SYSTEM COMPONENTS - FIGURE 14 (cont'd) (S/N 630210 thru present)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
35	RS0251	**Bolt**, Oetiker filter bracket mounting	2
36	R094040	**Adhesive**, rubber strip	1
37	R143174	**Decal**, prefilter	1
38	R024218	**Fitting**, fuel inlet	1
39	RP077014	**Gasket/Filter Kit**, prefilter	1
40	RA077014	**PreFilter Assembly**	1
41	R090272	**Bracket**, prefilter mounting	1
42	RS3858	**Clamp**, prefilter mounting	1
43	R096141	**Flatwasher**, mounting	3
44	R094035A	**Grommet**, rubber	3
45	RS1078	**Nut**, prefilter bracket mounting	2
46	RS1521L	**Nut**, locking	3
47	R096142	**Flatwasher**, mounting	3
48	R090271	**Bracket**, L.P. pump	1
48	R090271A	**Bracket**, L.P. pump ('05)	1
49	RA085091A	**Fuel Line Assembly**, fuel rail to fuel cooler	1
50	RA085098A	**Fuel Line Assembly**, fuel pump to fuel rail	1
51	23654	**Decal**, fuel cooler system warning	1
52	23649	**Decal**, fuel system warning	1
53	R127100	**Retainer**, fuel line	2
54	RS0256	**Bolt**, LPFP bracket attaching	2
55	93920000	**Lockwasher**, LPFP bracket attaching	2

HEAT EXCHANGER and COMPONENTS ('02-'03) - FIGURE 15

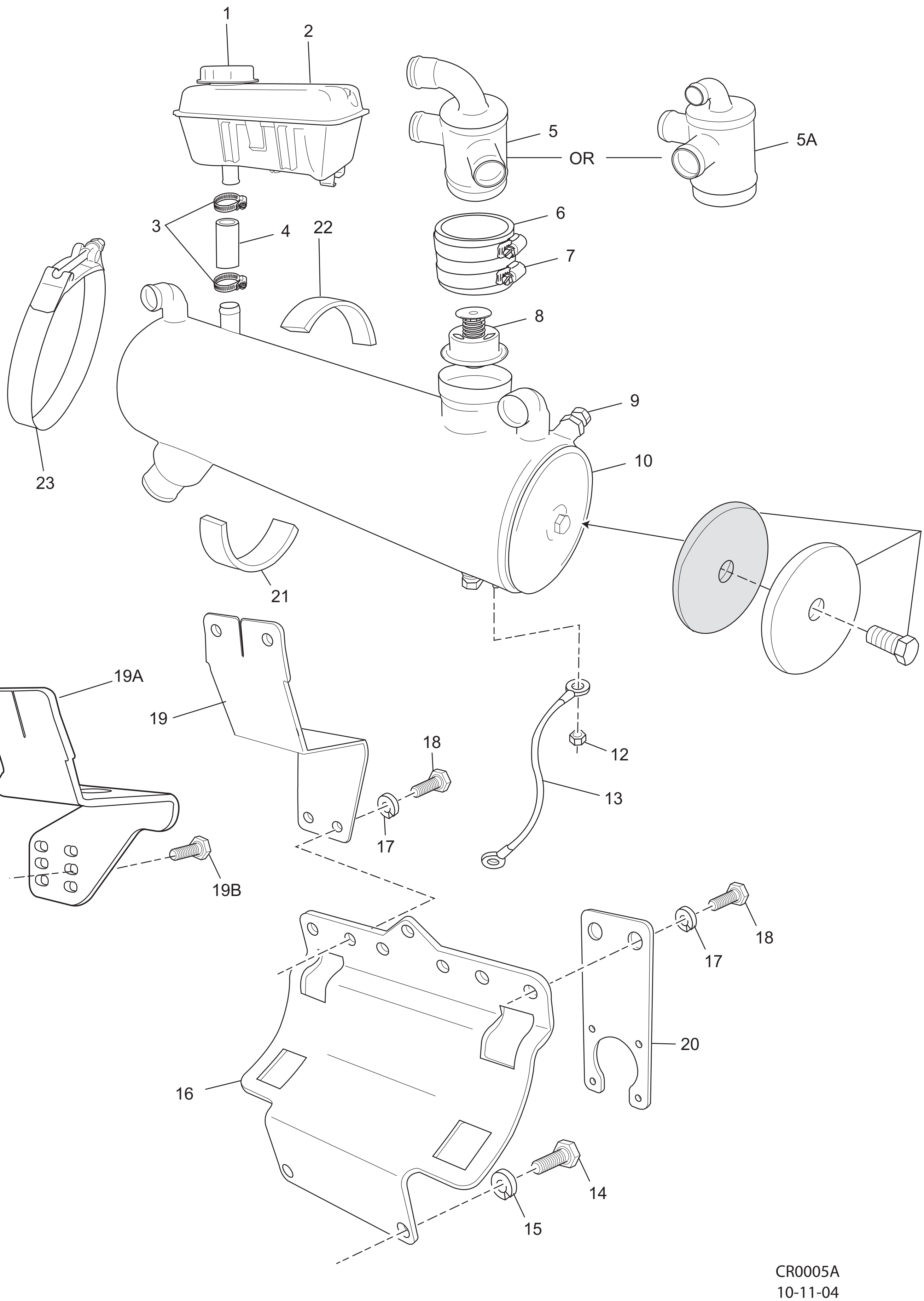


PC57B033aCR

HEAT EXCHANGER and COMPONENTS (‘02-’03) - FIGURE 15

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R171009	**Clamp**, exchanger mounting	2
2	R094041	**Isolator**, rubber, top	2
3	23627	**Decal**, exchanger	1
4	22847	**Decal**, exchanger	1
5	23657	**Decal**, exchanger	1
6	R168005	**Zinc**, sacrificial	1
7	RA147044	**Heat Exchanger Assembly**	1
8	22164	**End Cap Kit**, exchanger	AR
9	RS1078	**Nut**, w/lock, ground wire stud	1
10	R101013	**Wire**, grounding	1
11	R146002	**Bottle**, coolant overflow	1
12	23527	**Cap**, coolant fill	1
13	RS0280	**Bolt**, coolant overflow mounting (3/4”)	2
14	RS2179	**Lockwasher**, mounting bolt	2
15	92200000	**Washer**, mounting bolt	2
16	R045139	**Tube**, overflow	1
17	R090258	**Bracket**, heat exchanger	1
18	90368100	**Bolt**, heat exchanger bracket	4
19	RS2180	**Lockwasher**, heat exchanger bracket bolt	4
20	R094040	**Isolator**, rubber w/adhesive, bottom	2
NI	R143159	**Decal**, 5.7L Emission (C.A.R.B.), MY ‘03	1
NI	R143158	**Decal**, “Ultra Low Emission”, ‘03-newer	1

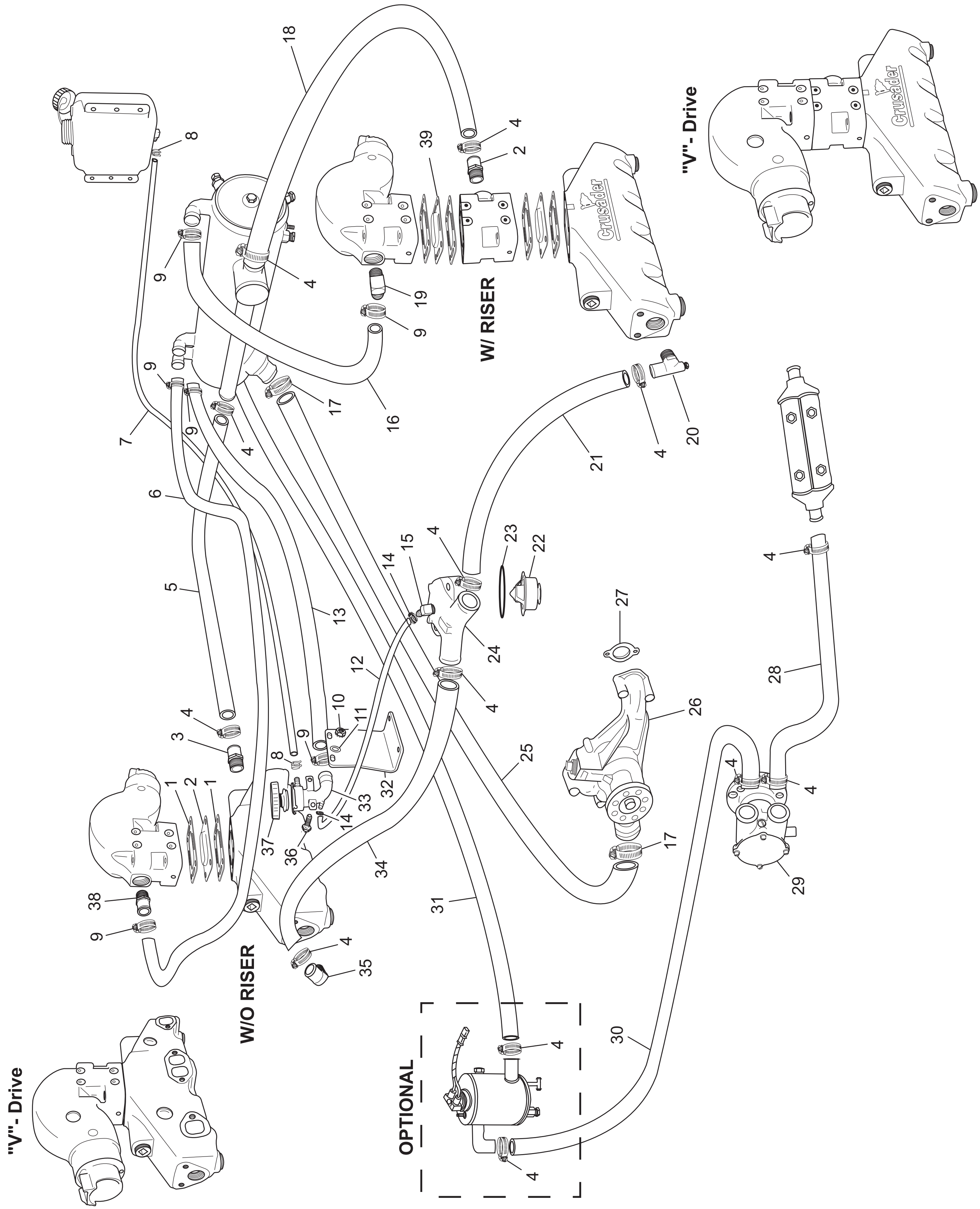
HEAT EXCHANGER and COMPONENTS ('04-'05) - FIGURE 16



HEAT EXCHANGER and COMPONENTS (‘04-’05) - FIGURE 16

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R034045	**Cap**, degas bottle	1
2	R146001	**Bottle**, degas	1
NI	R143169	**Decal**, specification, 5.0L	1
NI	R143170	**Decal**, specification, 5.7L	1
NI	R143153	**Decal**, coolant fill	1
3	RS3854	**Clamp**, hose	2
4	R045153	**Hose**, degas bottle to heat exchanger	1
4	R045164A	**Hose**, degas bottle to heat exchanger, V-Drive	1
5	R025038	**Housing**, tstat, heat exchanger (‘04-present)	1
5A	R025037	**Housing**, tstat, heat exchanger (OEM specific)	1
6	R045162	**Hose**, tstat housing	1
7	RS3860	**Clamp**, tstat housing	2
8	R026007	**Thermostat**, 170º F	1
9	R168005	**Anode**, sacrificial zinc	AR
10	RA147048	**Heat Exchanger Assembly**	1
11	23540	**End Cap Kit**, exchanger	AR
12	RS1078	**Nut**, ground wire stud	1
13	R101013	**Wire**, grounding	1
14	RS0304	**Bolt**, heat exchanger bracket attaching	2
15	RS2180	**Lockwasher**, h.e. bracket attaching	2
16	R090258	**Bracket**, heat exchanger	1
17	RS2179	**Lockwasher**, degas bottle brkt. attaching	4
18	98333020	**Bolt**, degas bottle bracket attaching	4
19	R090311	**Bracket**, degas bottle, std.	1
19A	R090301B	**Bracket**, degas bottle (MY ‘05, OEM specific)	1
19B	R009178	**Bolt**, degas bottle bracket attaching (R090301B)	2
20	R090291	**Bracket**, 10-pin connector	1
21	R094040	**Isolator**, rubber w/adhesive, bottom	2
22	R094041	**Isolator**, rubber, top	2
23	R171009	**Clamp**, exchanger mounting	2
NI	23627	**Decal**, Protective Anode	1
NI	R143159	**Decal**, 5.7L Emission (C.A.R.B.) ‘03 MY	1
NI	R143159-04	**Decal**, 5.7L Emission (C.A.R.B.) ‘04 MY	1
NI	R143159A	**Decal**, 5.7L Emission (C.A.R.B.) ‘05 MY	1
NI	R143158	**Decal**, “Ultra Low Emission”	1
NI	R143156	**Decal**, Raw Water Drain	1
NI	R143157	**Decal**, Fresh Water Drain	1

FRESH WATER COOLING SYSTEM COMPONENTS ('02-'03) - FIGURE 17

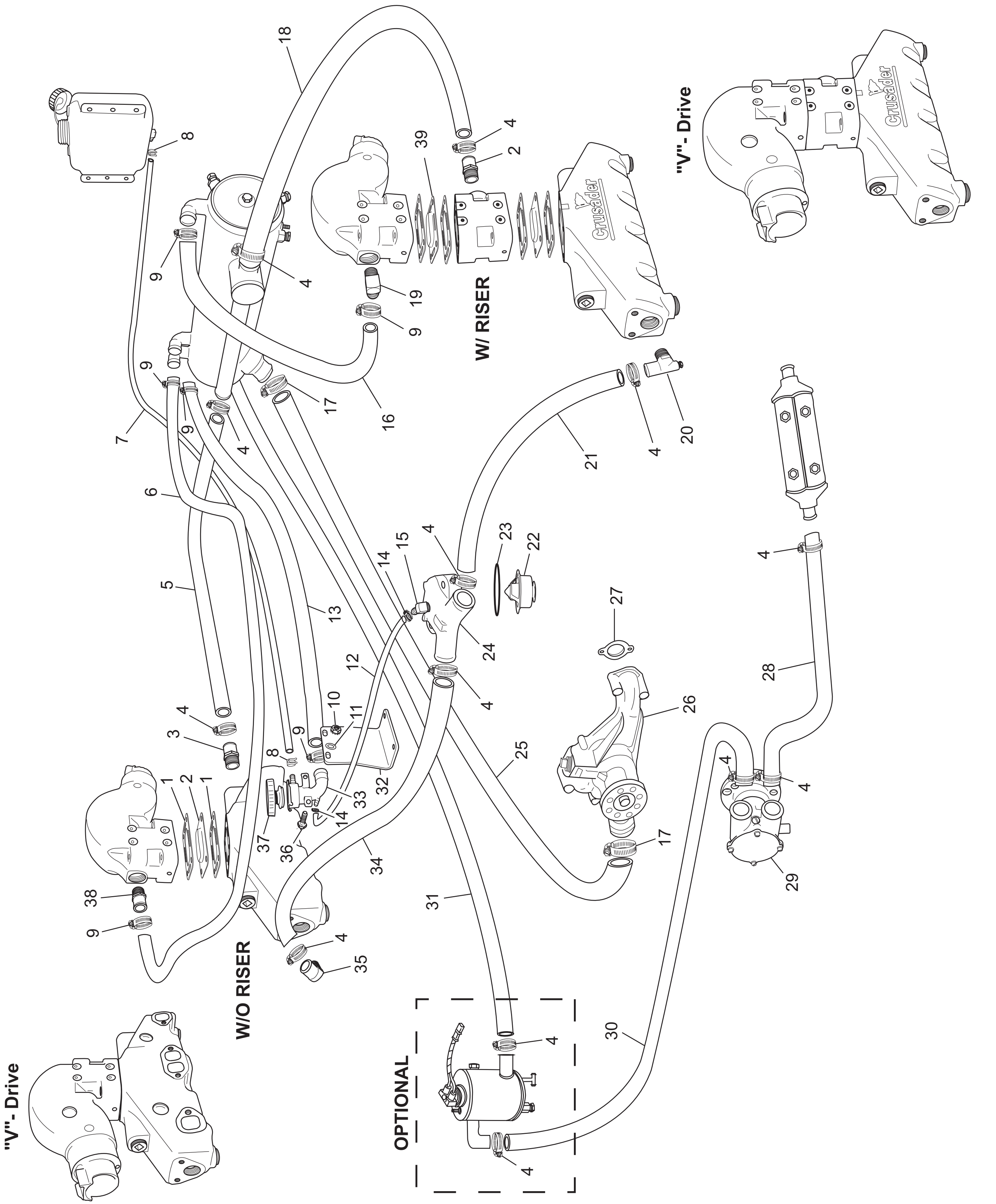


PC57B034CR

FRESH WATER COOLING SYSTEM COMPONENTS (‘02-’03) - FIGURE 17

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	98127	**Gasket**, elbow to riser / elbow to manifold / riser to manifold	8
2	98124	**Wing Plate**, blockoff	2
3	97852	**Fitting**, straight	2
4	RS3858	**Clamp**, hose (#20)	14
5	18402	**Hose**, manifold to heat exchanger (Starboard)	1
5	R045145	**Hose**, manifold to heat exchanger (Starboard)(w/ 4” risers)	AR
6	18340	**Hose**, heat exchanger to exhaust elbow (Starboard STD)	1
6	R045125A	**Hose**, heat exchanger to exhaust elbow (Starboard “V”- Drive)	AR
6	R045124A	**Hose**, heat exchanger to exhaust elbow (Starboard)(w/ 4” risers)	AR
7	R045139	**Hose**, fill riser to overflow bottle	1
8	R127084	**Clamp**, hose	2
9	RS3851	**Clamp**, hose (#16)	6
10	RS1078	**Nut**, fill riser attaching	2
11	92100000	**Lockwasher**, fill riser attaching	2
12	R045132	**Hose**, thermostat housing fitting to fill riser	1
13	R045124	**Hose**, fill riser to heat exchanger	1
14	RS3870	**Clamp**, hose	2
15	R024055	**Fitting**, thermostat housing 90 degree	1
16	R045125	**Hose**, heat exchanger to exhaust elbow (Port STD)	1
16	18311	**Hose**, heat exchanger to exhaust elbow (Port “V”- Drive)	1
17	RS3855	**Clamp**, hose (#32)	2
18	18402	**Hose**, manifold to heat exchanger (Port)	1
18	R045145	**Hose**, manifold to heat exchanger (Port)(w/ 4” risers)	AR
19	R024006A	**Fitting**, 90 degree	1
20	30624	**Fitting**, exhaust manifold (90 degree)	1
21	R045140	**Hose**, thermostat housing to exhaust manifold (Port)	1
22	R026002F	**Thermostat**, (160 degree)	1
23	R047189	**O-Ring**, thermostat	1
24	97851	**Housing**, thermostat	1
25	18306	**Hose**, circulation pump to exchanger	1
26	RA057027	**Water Pump Assembly**	1
27	RM0203	**Gasket**, water pump to engine block	2
28	R045106	**Hose**, oil cooler to raw water pump	1
29	RA057026	**Raw Water Pump Assembly**	1
30	R045102	**Hose**, raw water pump to fuel cooler (returnless fuel)	1

FRESH WATER COOLING SYSTEM COMPONENTS (‘02-’03) - FIGURE 17 (cont’d)

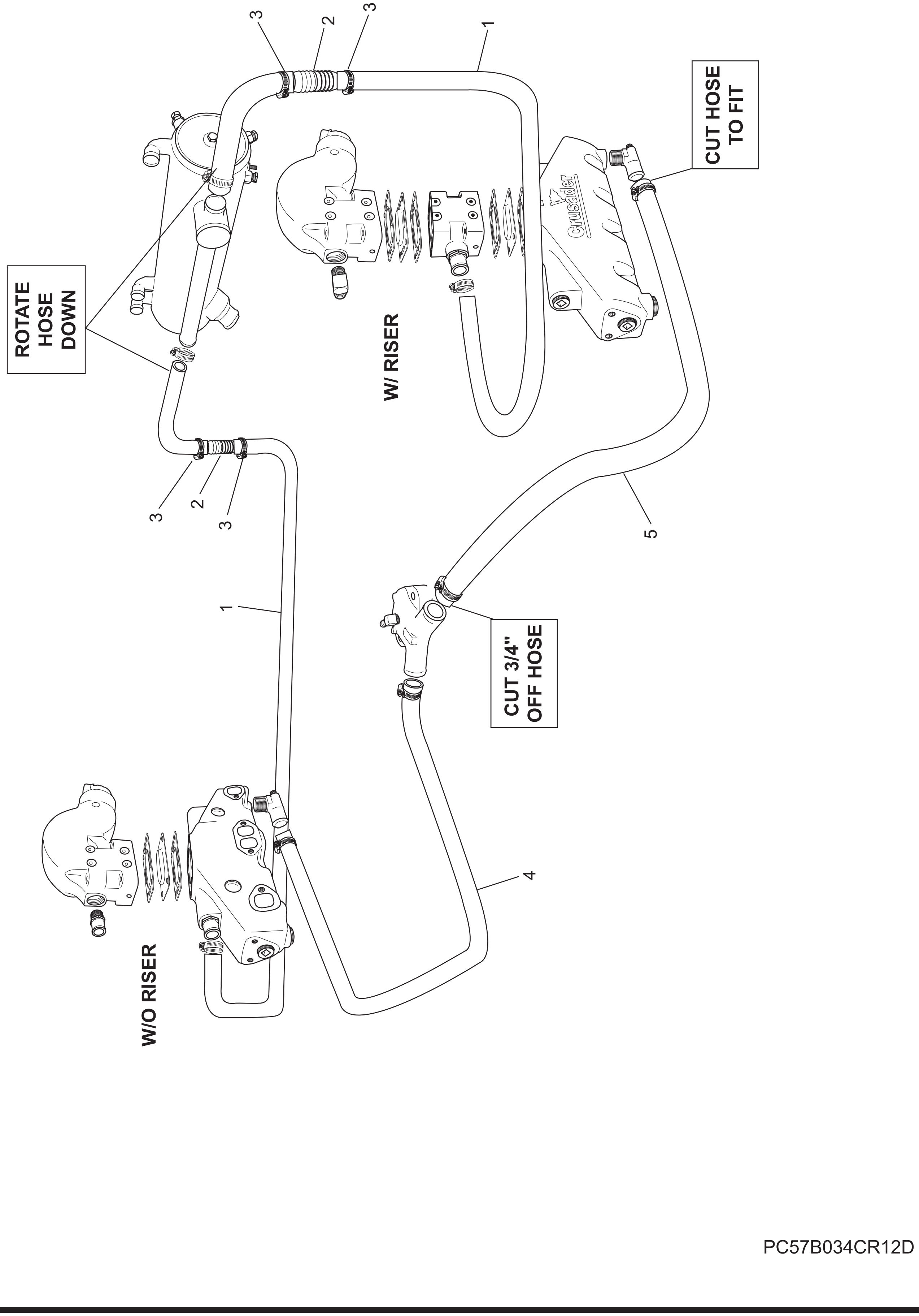


PC57B034CR

FRESH WATER COOLING SYSTEM COMPONENTS ('02-'03) - FIGURE 17 (cont'd)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
30	R045112	**Hose**, raw water pump to fuel cooler (returnless fuel)(RH rotation engine)	AR
31	R045102A	**Hose**, fuel cooler to heat exchanger (returnless fuel)	1
32	R090260	**Bracket**, fill riser mounting	1
33	R034047	**Fill Riser Assembly**	1
34	R045141	**Hose**, thermostat housing to exhaust manifold (Starboard)	1
35	30624	**Fitting**, exhaust manifold (90 degree)	1
36	90105075	**Bolt**, fill riser attaching	2
37	RK034006A	**Cap**, fill riser pressure cap (7 lb.)	1
38	97852	**Fitting**, straight	1
39	98124A	**Wing Plate**, pass-thru	2

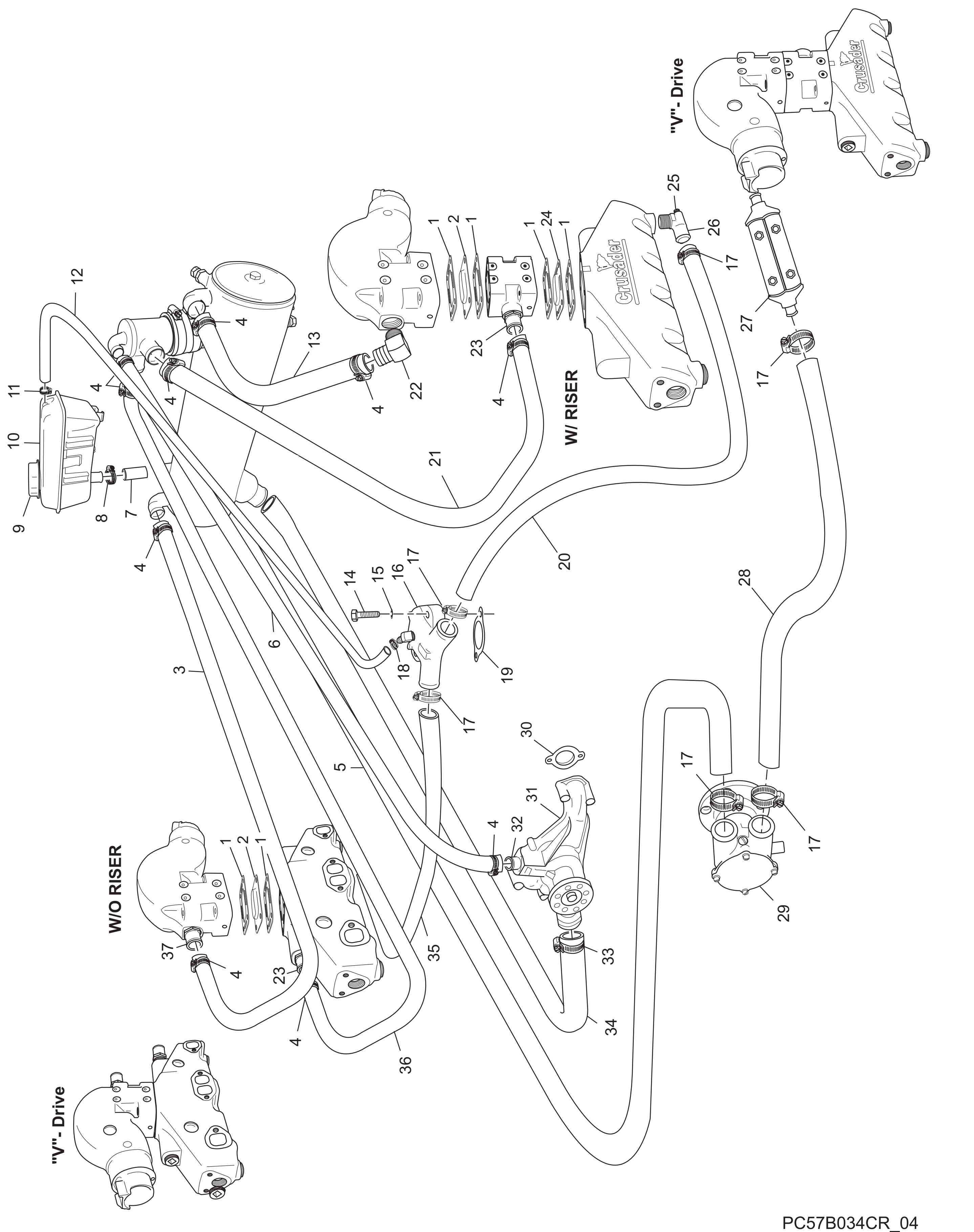
12° FRESH WATER COOLING INSTALLATION - UNIQUE COMPONENTS (‘02-’03) - FIGURE 18



12° FRESH WATER COOLING INSTALLATION - UNIQUE COMPONENTS (‘02-’03) - FIGURE 18

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	18369	**Hose**, H.E. 18402 hose to exhaust manifold (cut-to-fit)	2
2	R024221	**Fitting**, 1-1/4” hose coupler	1
3	RS3858	**Clamp**, hose 1-1/4”	4
4	18334	**Hose**, thermostat housing to exhaust manifold (Starboard)	1
5	18333	**Hose**, thermostat housing to exhaust manifold (Port)	1

FRESH WATER COOLING SYSTEM COMPONENTS (‘04) - FIGURE 19

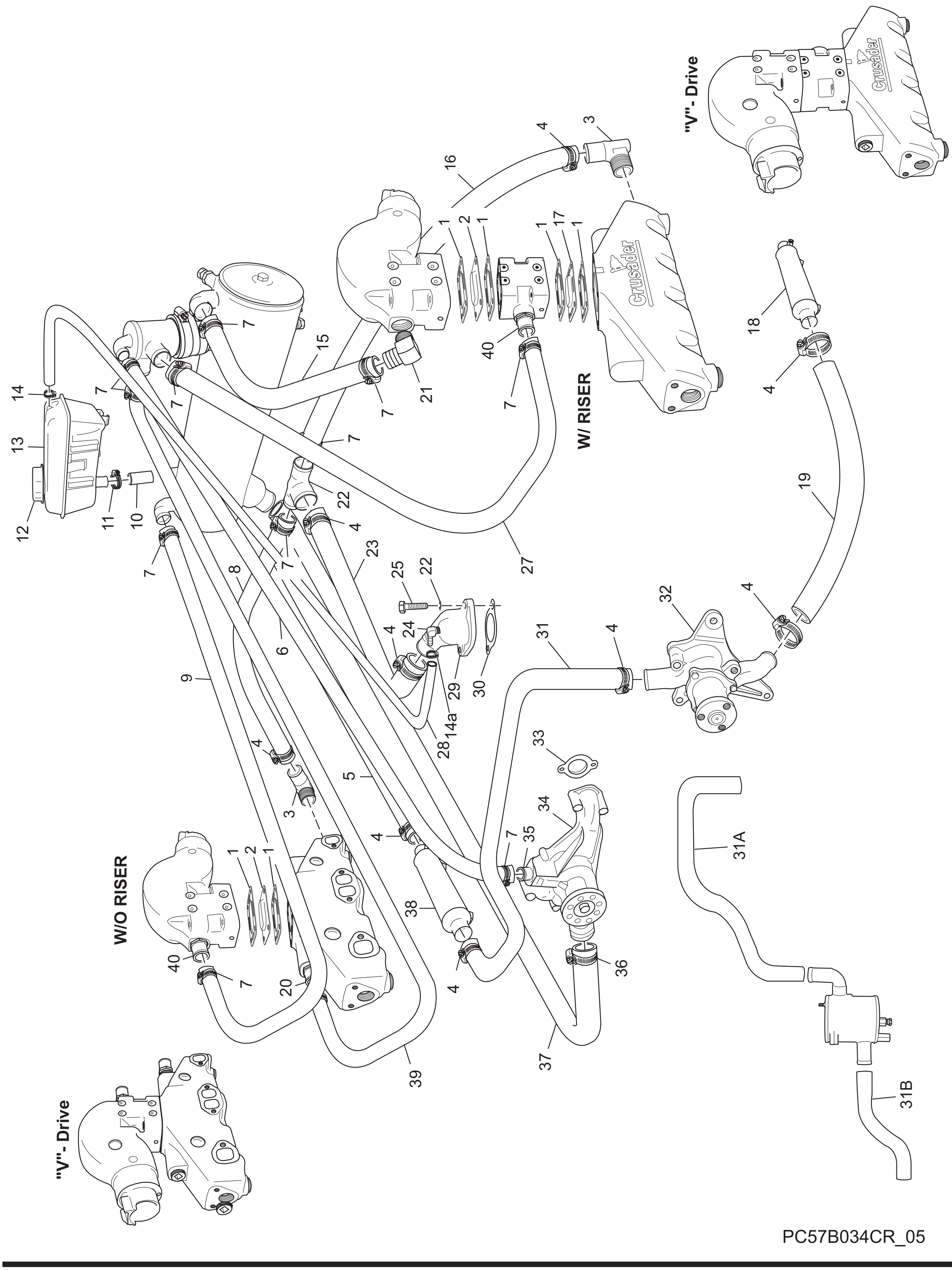


PC57B034CR_04

FRESH WATER COOLING SYSTEM COMPONENTS (‘04) - FIGURE 19

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	98127	**Gasket**, elbow to riser / elbow to manifold / riser to manifold	8
2	98124	**Wing Plate**, blockoff	2
3	18340	**Hose**, heat exchanger to exhaust elbow (Starboard STD)	1
3	R045124A	**Hose**, heat exchanger to exhaust elbow (Starboard “V”- Drive)	AR
4	RS3858	**Clamp**, hose (#20)	14
5	R045102A	**Hose**, raw water pump to heat exchanger	1
6	R045086	**Hose**, bypass	AR
7	R045153	**Hose**, degas bottle to heat exchanger	1
NI	R045164A	**Hose**, degas bottle to heat exchanger, (V-Drive)	1
8	R127084	**Clamp**, hose	2
9	R034045	**Cap**, degas bottle	1
10	R146001	**Bottle**, degas	1
11	R127087	**Clamp**, hose	1
12	R045132	**Hose**, degas bottle to water neck fitting	AR
13	R045125	**Hose**, heat exchanger to exhaust elbow (Port STD)	1
13	R045125A	**Hose**, heat exchanger to exhaust elbow (Port “V”- Drive)	1
14	RS0306	**Bolt**, housing attaching	2
15	RS2180	**Lockwasher**, housing attaching	2
16	97851	**Housing**, coolant distribution	1
17	RS3851	**Clamp**, hose (#16)	6
18	RS3870	**Clamp**, hose	1
19	RM0121	**Gasket**, housing to intake manifold	1
20	18333	**Hose**, water neck to exhaust manifold (Port)	1
21	R045109	**Hose**, manifold to thermostat housing (Port)(w/ 4” risers)	AR
NI	18402	**Hose**, manifold to thermostat housing (Port)	1
22	R024006A	**Fitting**, 90 degree	1
23	R024073	**Fitting**, straight	1
24	98124A	**Wing Plate**, pass-thru	4
25	RS3552	**Plug**, drain	2
26	30624	**Fitting**, exhaust manifold (90 degree)	2
27	R147035	**Oil Cooler Assembly**	1
28	R045106	**Hose**, oil cooler to raw water pump	1
29	RA057026	**Raw Water Pump Assembly**	1
30	RM0203	**Gasket**, water pump to engine block	2
31	RA057027	**Water Pump Assembly**	1
32	R024217	**Fitting**, 5/8” hose barb	1
33	RS3855	**Clamp**, hose (#32)	2
34	R045146	**Hose**, circulation pump to exchanger	1
35	18334	**Hose**, water neck to exhaust manifold (Starboard)	1
36	R045157B	**Hose**, manifold to thermostat housing (Starboard)	1
NI	18413	**Hose**, manifold to thermostat housing (Starboard)(w/ 4” risers)	AR
37	97911	**Fitting**, straight (3/4” pipe)	1

FRESH WATER COOLING SYSTEM COMPONENTS (‘05) - FIGURE 20

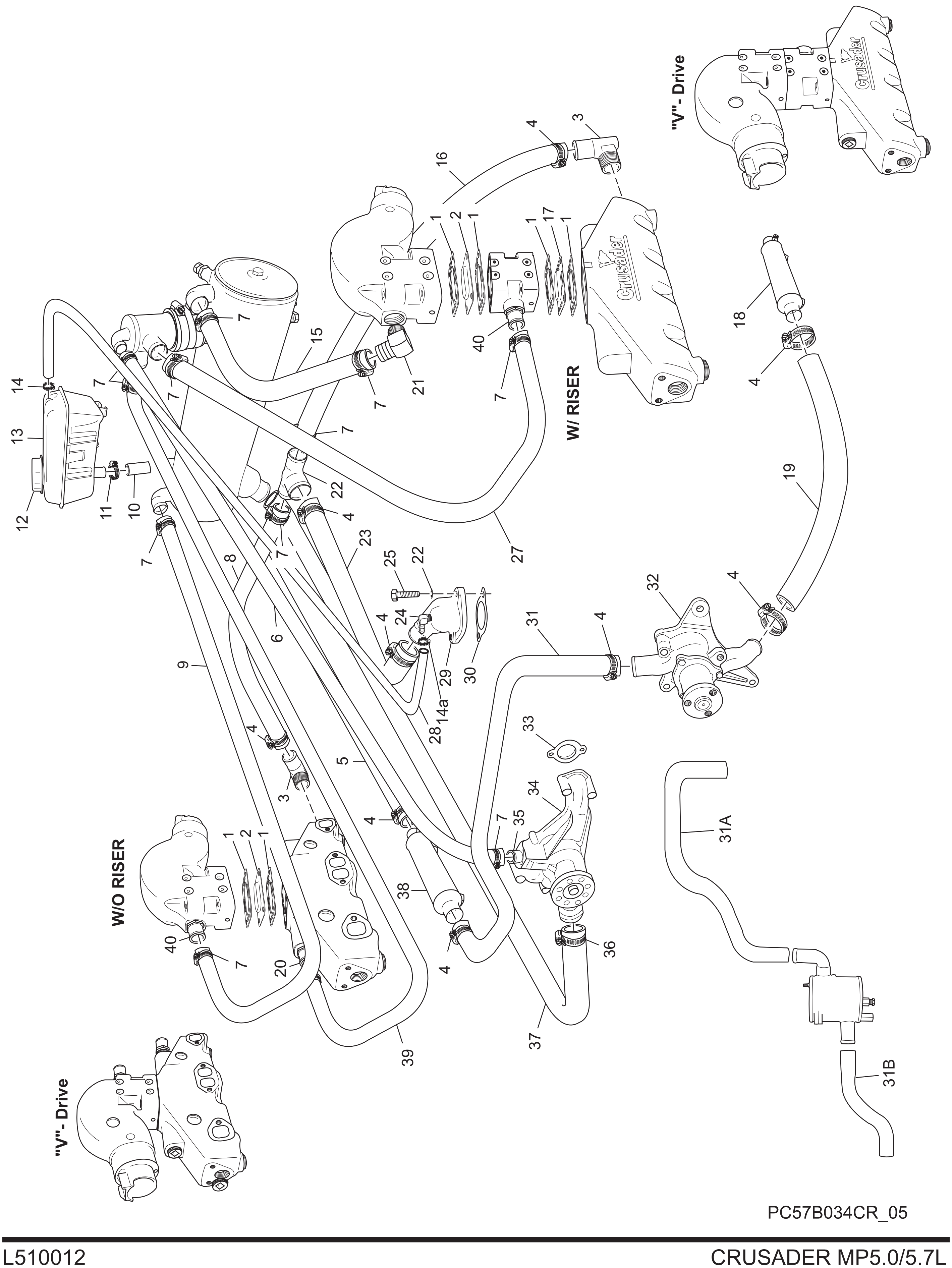


PC57B034CR_05

FRESH WATER COOLING SYSTEM COMPONENTS (‘05) - FIGURE 20

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	98127	**Gasket**, elbow / riser / manifold (*Quantity - 8, w/ 4” riser)	4
2	98124	**Plate**, block-off	2
3	30624	**Fitting**, exhaust manifold (90 degree) (1” NPT X 1-1/4” hose)	2
N.I.	RS3552	**Plug**, drain	2
4	RS3858	**Clamp**, hose	10
5	R045144A	**Hose**, transmission cooler to heat exchanger	1
5	18390	**Hose**, transmission cooler to heat exchanger, cut-to-fit (returnless fuel system)	1
6	20806	**Hose**, t-stat housing to circulating pump 5/8” i.d.	AR
7	RS3851	**Clamp**, hose	12
8	R045136B	**Hose**, coolant tee to exhaust manifold (starboard)	1
9	R045124	**Hose**, heat exchanger to elbow (starboard) (direct drive)	1
9	18311	**Hose**, heat exchanger to elbow (starboard) (v-drive)	1
10	R045153	**Hose**, degas bottle to heat exchanger	1
10	R045164A	**Hose**, degas bottle to heat exchanger (v-drive)	1
11	RS3854	**Clamp**, hose	2
12	R034045	**Cap**, degas bottle	1
13	R146001	**Bottle**, degas	1
14	R127087	**Clamp**, hose	1
14a	RS3870	**Clamp**, hose	1
15	R045125	**Hose**, heat exchanger to elbow (Port) (direct drive)	1
15	R045125A	**Hose**, heat exchanger to elbow (Port) (v-drive)	1
16	R045136	**Hose**, coolant tee to exhaust manifold (port)	1
17	98124A	**Plate**, vented (used w/ 4” riser)	2
18	R147049	**Cooler**, engine oil	1
19	R045159B	**Hose**, engine oil cooler to raw water pump	1
20	R024212	**Fitting**, straight (1” NPT X 1-1/4” hose)	3
21	R024006A	**Fitting**, 90 degree (3/4” NPT X 1” hose)	1
22	R024054C	**Tee**, coolant, 1-1/4 x 1 x 1	1
23	R045144	**Hose**, water neck to coolant tee	1
24	R024055	**Fitting**, 90 degree, water neck	1
25	RS0304	**Bolt**, water neck attaching	2
26	RS2180	**Lockwasher**, water neck attaching	2

FRESH WATER COOLING SYSTEM COMPONENTS (‘05) - FIGURE 20 (cont’d)

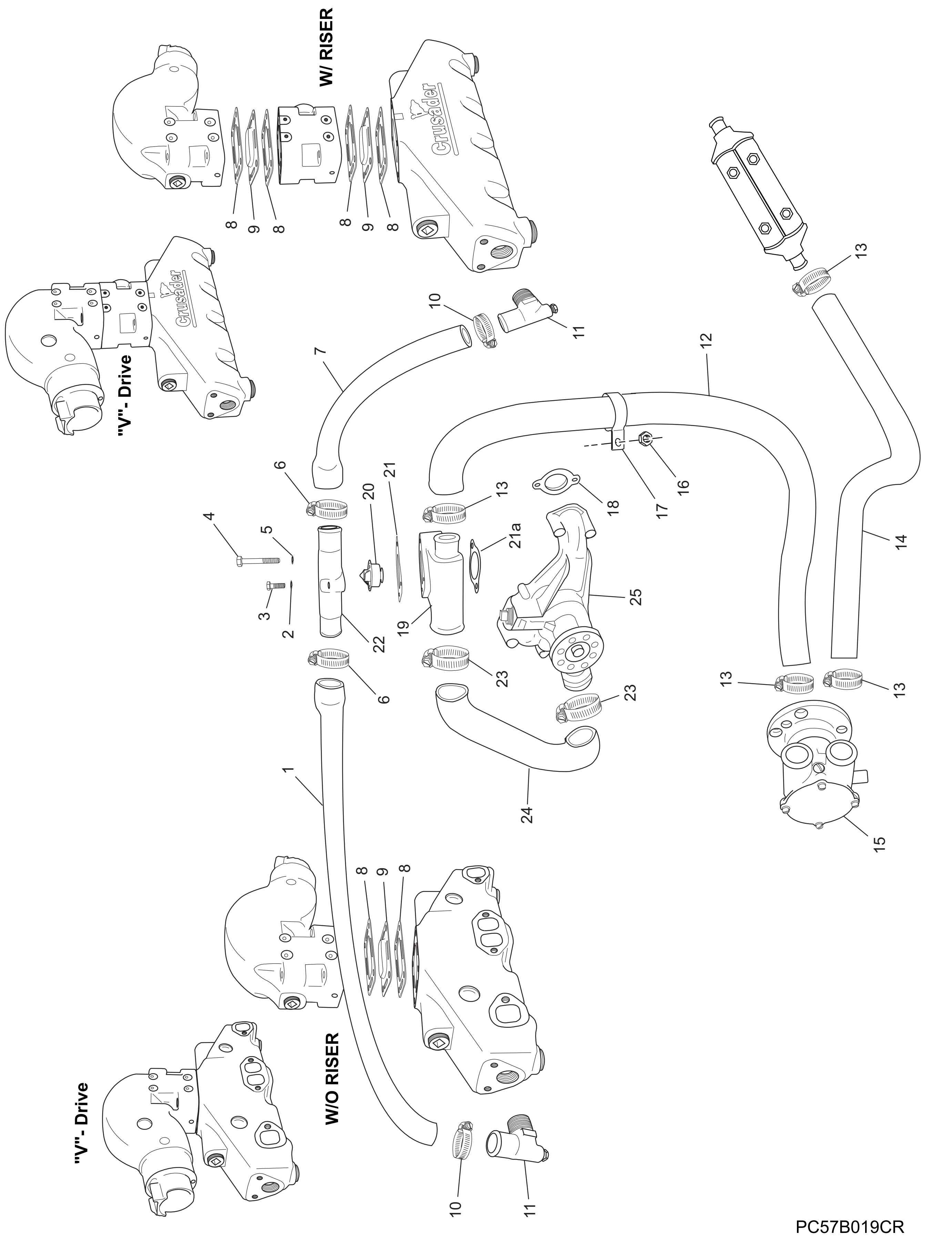


PC57B034CR_05

FRESH WATER COOLING SYSTEM COMPONENTS (‘05) - FIGURE 20 (cont’d)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
27	TBD	**Hose**, t-stat housing to 4” riser (port)	1
N.I.	R045157A	**Hose**, t-stat housing to manifold w/o 4” riser (port)	1
N.I.	R045157B	**Hose**, t-stat housing to manifold (used w/R025037 tstat housing) (port)	1
28	R045132	**Hose**, degas bottle to water neck fitting	AR
29	R025015A	**Water Neck**	1
30	96105	**Gasket**, water neck	1
31	R045166	**Hose**, raw water pump to transmission cooler	1
31A	R045168	**Hose**, raw water pump to returnless fuel canister	1
31B	18390	**Hose**, returnless fuel canister to transmission cooler (cut-to-fit) NOTE: when cut #18390 will fit fuel cooler to trans cooler and trans cooler to heat exchanger	1
32	RA057034	**Raw Water Pump**	1
33	RM0203	**Gasket**, water pump to engine block	2
34	RA057027	**Water Pump Assembly**	1
35	23555	**Fitting**, 5/8” hose barb	2
36	RS3852	**Clamp**, hose (#32)	2
37	R045146	**Hose**, heat exchanger to circulating pump	1
38	R147006	**Cooler**, transmission oil	1
39	R045157	**Hose**, t-stat housing to manifold w/o 4” riser (starboard)	1
N.I.	TBD	**Hose**, t-stat housing to 4” riser (starboard)	1
40	R024073	**Fitting**, straight (3/4” NPT X 1” hose)	1

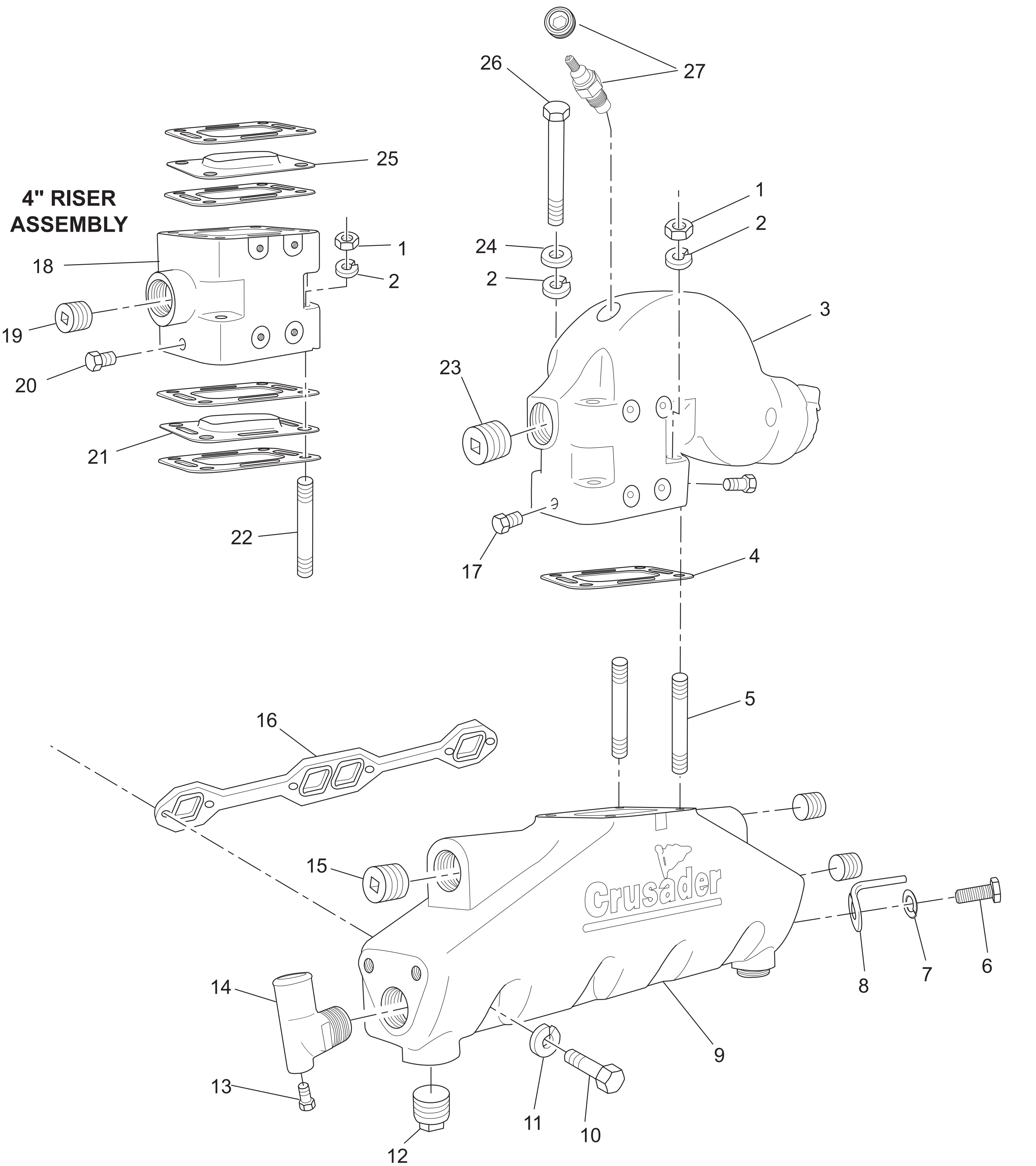
RAW WATER COOLING SYSTEM COMPONENTS ('02-'03) - FIGURE 21



RAW WATER COOLING SYSTEM COMPONENTS (‘02-’03) - FIGURE 211

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R045141	**Hose**, fill riser to exhaust manifold (starboard)	1
2	93920000	**Lockwasher**, attaching bolt	1
3	98223035	**Bolt**, upper fill riser to lower fill riser attaching	1
4	98333080	**Bolt**, upper fill riser to lower fill riser attaching	2
5	RS2179	**Lockwasher**, attaching bolt	2
6	RS3858	**Clamp**, hose	2
7	R045140	**Hose**, fill riser to exhaust manifold (port)	1
8	98127	**Gasket**, elbow to riser / elbow to manifold / riser to manifold	8
9	98124A	**Wing Plate**, pass-thru	4
10	RS3858	**Clamp**, hose	2
11	30624	**Fitting**, 90 degree	2
12	R045097	**Hose**, raw water pump to fill riser	1
13	RS3858	**Clamp**, hose	4
14	R045106	**Hose**, oil cooler to raw water pump	1
15	RA057026	**Raw Water Pump Assembly**	1
16	RS1527	**Nut**, strap clamp attaching	1
17	R090082	**Clamp**, strap	1
18	RM0203	**Gasket**, water pump to engine block	2
19	R025031	**Thermostat Housing**, lower	1
20	R026002	**Thermostat**, coolant (160 degree)	1
21	RM0258	**Gasket**, upper housing to lower tstat housing	1
21a	RM0121	**Gasket**, housing to intake manifold	1
22	R025032	**Thermostat Housing**, upper	1
23	RS3852	**Clamp**, hose	2
24	R045048	**Hose**, fill riser to water pump	1
25	RA057027	**Water Pump Assembly**	1

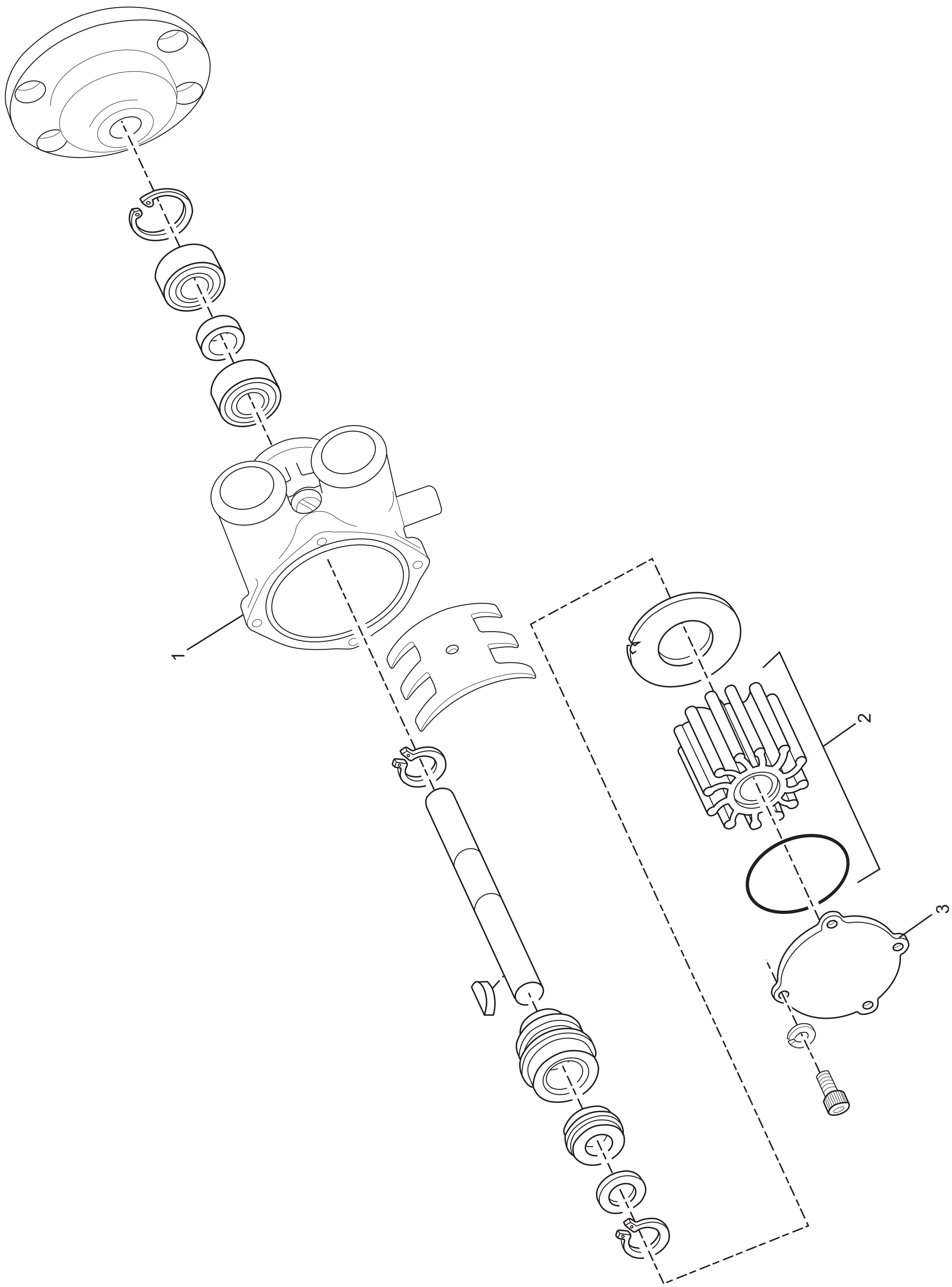
EXHAUST MANIFOLD and COMPONENTS - FIGURE 22



EXHAUST MANIFOLD and COMPONENTS - FIGURE 22

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS1028	**Nut**, elbow attaching stud	4
2	RS2180	**Lockwasher**, elbow attaching stud	8
3	R029015	**Elbow**, exhaust manifold	2
4	98127	**Gasket**, manifold/elbow/riser	8
5	20827	**Stud**, exhaust elbow attaching	4
6	RS2180	**Bolt**, wire loom attaching	2
7	RS0302	**Lockwasher**, attaching bolt	2
8	R096144	**Bracket**, spark plug wire loom	2
9	98243	**Manifold**, exhaust	2
10	RS0316	**Bolt**, manifold to cylinder head	8
11	RS2180	**Lockwasher**, manifold to cylinder head	8
12	103876	**Plug**, drain	4
13	RS3552	**Plug**, drain	1
14	30624	**Fitting**, water elbow (90 degree)	1
15	103876	**Plug**, exhaust manifold (1”)	6
16	RM0119	**Gasket**, manifold to cylinder head	2
17	RS3552	**Plug**, drain	4
*	22818	**4-Inch Riser Kit**	1
18	98128	**Exhaust Riser**	2
19	RS3556	**Plug**, exhaust riser (3/4”)	2
20	RS3554	**Plug**, drain	4
21	98124A	**Wing Plate**, pass-thru	2
22	20783	**Stud**, riser mounting (2 3/4”)	4
23	RS3556	**Plug**, exhaust elbow (3/4”)	2
24	RS2674	**Washer**, elbow attaching	4
25	98124	**Wing Plate**, block-off	2
26	90305475	**Bolt**, exhaust elbow attaching (4 3/4”)	4
27	R020047	**Switch**, exhaust temperature (‘04 -newer)	2
27	RS3539	**Plug**, w/o exhaust temperature sw (‘04 -newer)	2
		***NOTE:** See Fresh Water Cooling section for parts used on Fresh Water Cooled engines.	

RAW WATER COOLING PUMP (‘02-’04) - FIGURE 23

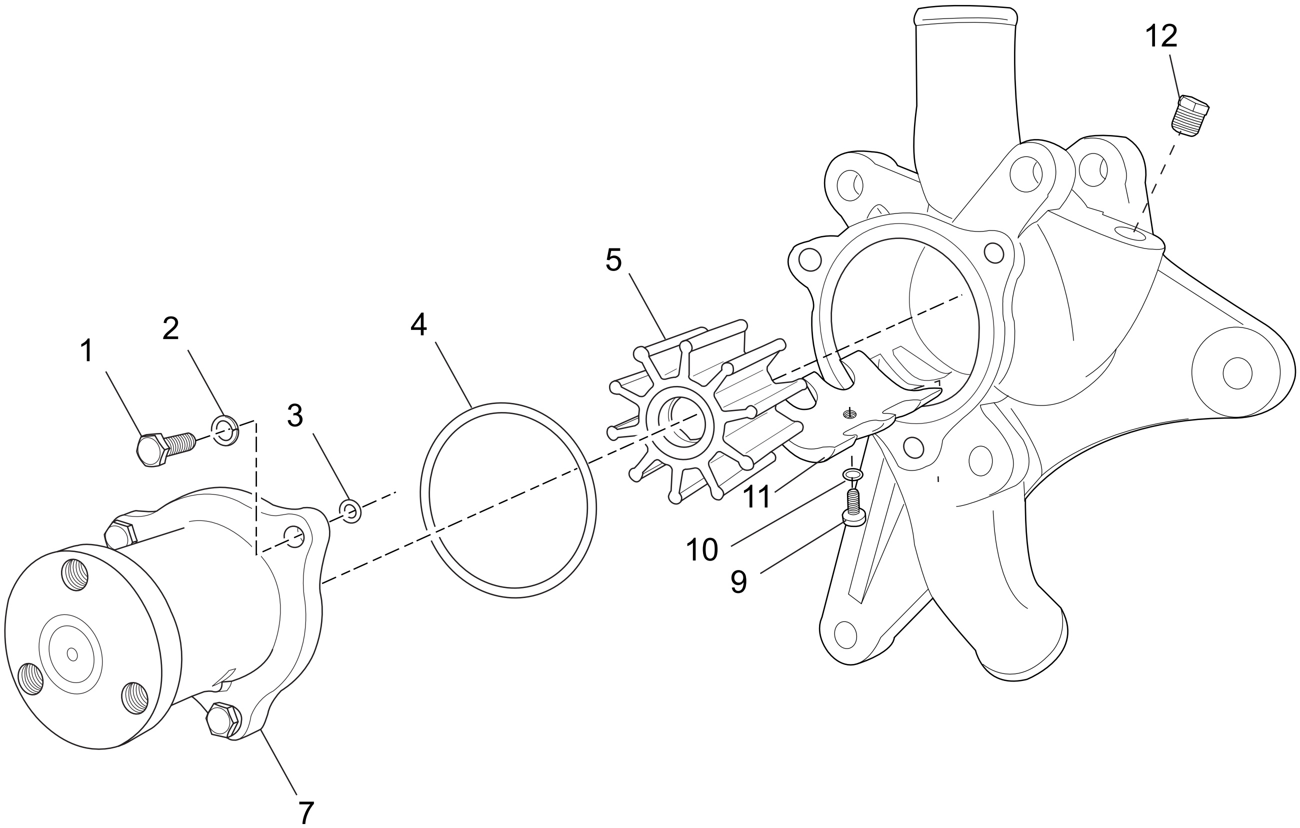


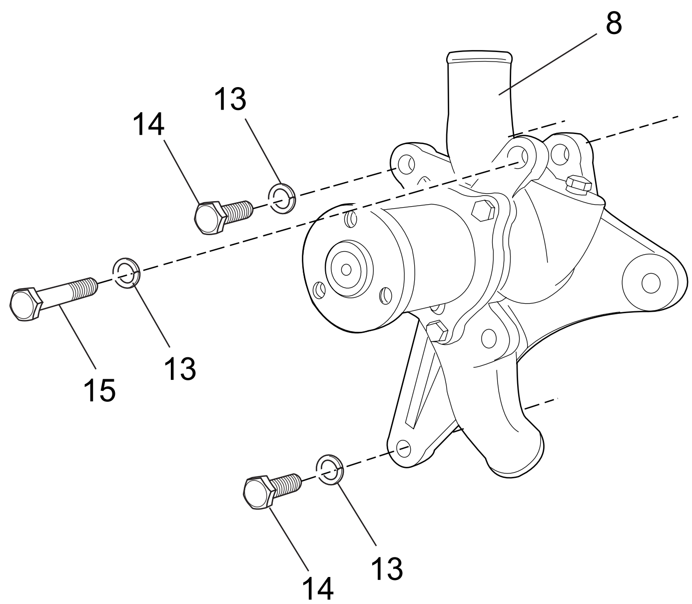
PC57B028

RAW WATER COOLING PUMP (‘02-’04) - FIGURE 23

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA057026	**Raw Water Pump Assembly**	1
2	RP061017	**Kit,** impeller	1
3	40060	**Cover**, raw water pump	1
3	R109055	**Cover**, raw water pump, March ‘05 and newer	1

RAW WATER COOLING PUMP (SERPENTINE) (‘05) - FIGURE 24

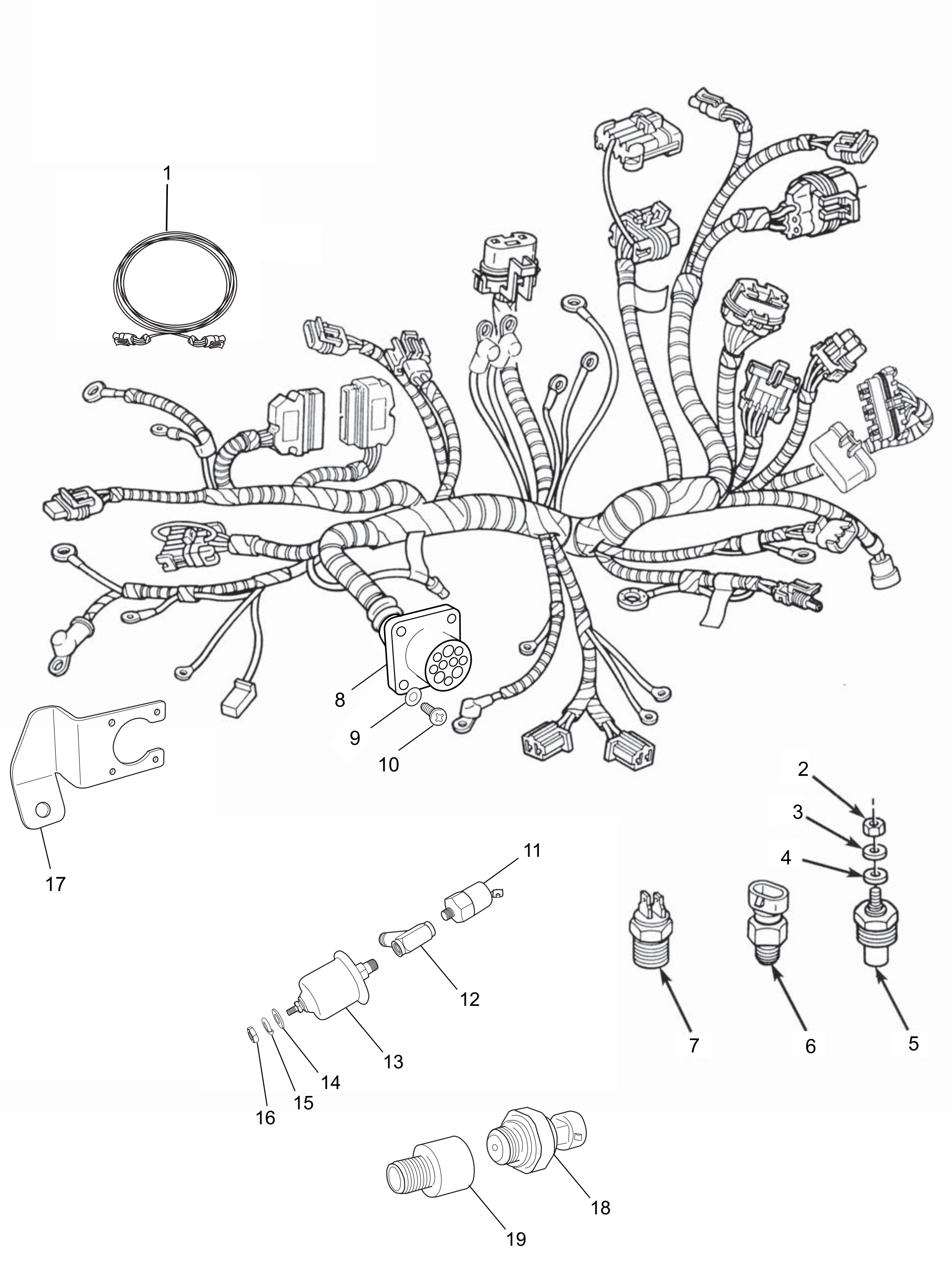




RAW WATER COOLING PUMP (SERPENTINE) (‘05) - FIGURE 24

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	TBD	**Bolt,** bearing housing attaching	3
2	TBD	**Lockwasher,** bearing housing attaching bolt	3
3	R047243	**O-ring,** bearing housing attaching bolt	3
4	R047242	**O-ring,** bearing housing attaching	1
5	RP061022	**Impeller Kit** (includes O-rings and impeller)	1
6	R057034	**Housing,** raw water pump	1
7	RA134071	**Bearing Housing Assembly**	1
8	RA057034	**Raw Water Pump Assembly**	1
9	TBD	**Bolt,** raw water pump cam	1
10	TBD	**Lockwasher,** raw water pump cam	1
11	R161018	**Cam,** raw water pump	1
12	RS3554	**Plug**, brass 1/8 NPT	1
13	RS2180	**Lockwasher,** raw water pump attaching	3
14	RS0306	**Bolt,** raw water pump attaching	2
15	RS0454	**Bolt,** raw water pump attaching	1

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 25

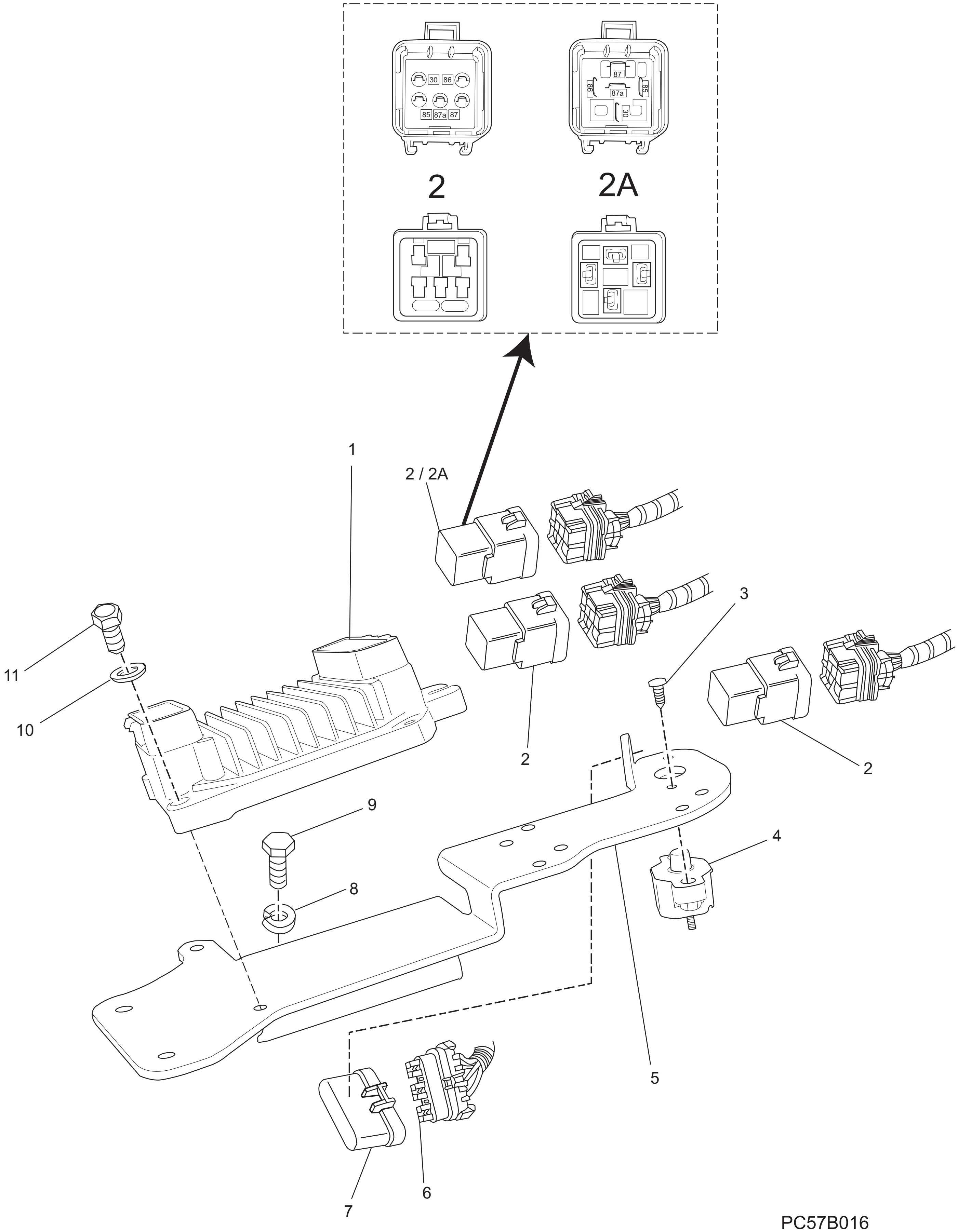


PC57B025CR

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 25

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA121072A	**Harness**, slave 4-pin connector (twin applications only)	AR
2	RS1540	**Nut**, sender terminal	1
3	RS2197	**Lockwasher**, sender terminal	1
4	RS2746	**Washer**, sender terminal	1
5	R020003	**Sender**, temperature	1
5	22701	**Sender**, temperature (VDO)	AR
6	R020019	**Sensor**, engine coolant temperature (ECT)	1
7	R020037	**Switch**, transmission alarm	1
8	RA121079	**Engine Wiring Harness Assembly** (With round 10-pin boat harness connection)	1
8	RA121082	**Engine Wiring Harness Assembly** (With16-pin boat harness connection)	AR
9	R096142	**Washer**, main harness attaching	4
10	RS5115	**Screw**, main harness attaching	4
11	R020015A	**Switch**, oil pressure	1
12	R024205	**Tee**, sender attaching	1
13	R020001	**Sender**, oil pressure	1
13	22702	**Sender**, oil pressure (VDO)	AR
14	RS2746	**Washer**, sender terminal	1
15	RS2197	**Lockwasher**, sender terminal	1
16	RS1540	**Nut**, sender terminal	1
17	R090251	**Bracket**, main harness attaching	1
18	R020048	**Sensor**, CAN BUS oil pressure	AR
19	R024223	**Adapter**, CAN BUS oil pressure sensor	AR
NI	RA121062D	**Harness**, extension, fuel pump	AR

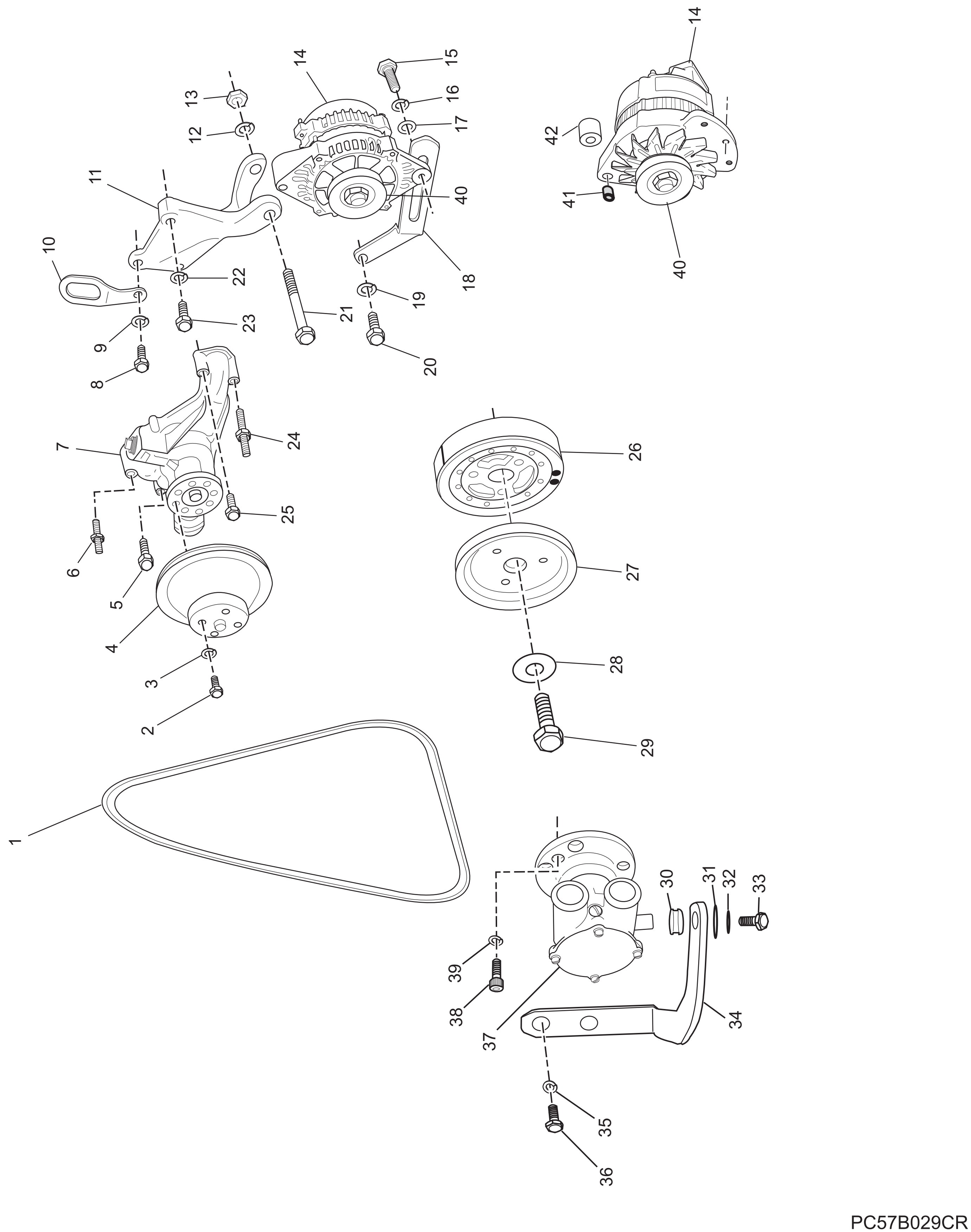
ECM and RELAYS - FIGURE 26



ECM and RELAYS - FIGURE 26

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R116021L cksum - 16259 (3F83)	**Engine Control Module (5.0L - LH)** (With 10-Pin boat harness connector)	AR
1	R116021B cksum - 33193 (81A9)	**Engine Control Module (5.7L - LH)** (With 10-Pin boat harness connector)	AR
1	R116021N cksum - 33641/33659	**Engine Control Module (5.7L - LH)** (8369/837B) (With 16-Pin boat harness connector)	AR
1	R116021E cksum - 8081 (1F91)	**Engine Control Module (5.7L - RH)** (With 10-Pin boat harness connector)	AR
2	R130012	**Relay**, fuel pump, ignition, starter	3
2A	R130011A	**Relay**, fuel pump, ignition, starter (Refer to diagram)	3
3	RS5084	**Bolt**, circuit breaker mounting	2
4	R153006C	**Circuit Breaker Assembly (60 amp)**	1
5	R090250	**Bracket**, ECM/relay mounting	1
6	R153017B	**Fuses**, 20 amp	3
7	R126014	**Cover**, fuse holder	1
8	93920000	**Lockwasher**, bracket attaching bolt	2
9	98223016	**Bolt**, bracket attaching	2
10	RS2178	**Washer**, ECM attaching	2
11	90105075	**Bolt**, ECM attaching	2

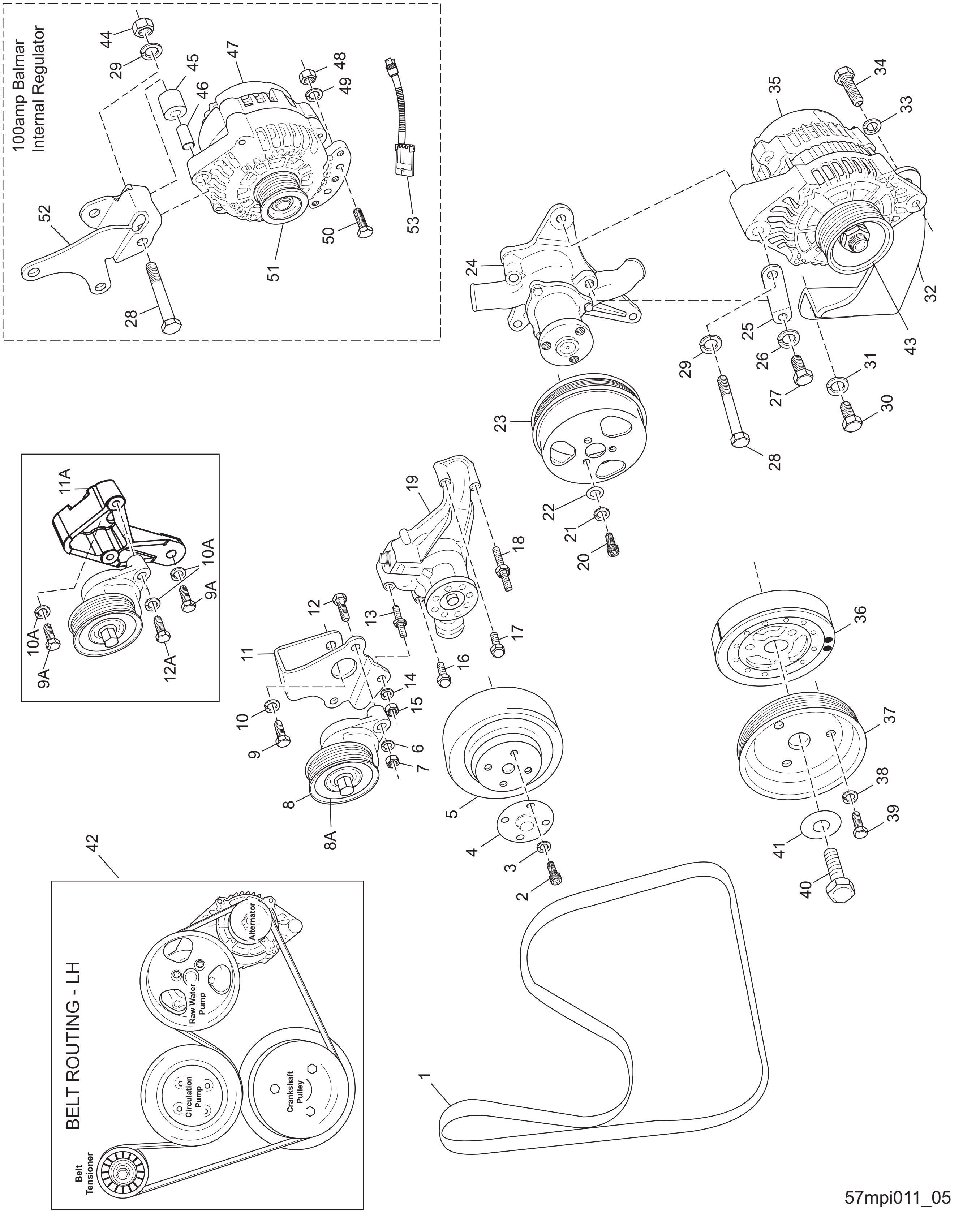
ACCESSORY DRIVE SYSTEM COMPONENTS (‘02-’04) - FIGURE 27



ACCESSORY DRIVE SYSTEM COMPONENTS ('02-'04) - FIGURE 27

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066008	**Belt**, alternator drive (70 amp)	1
1	96307	**Belt**, alternator drive (100 amp)	1
2	RS0775	**Bolt**, water pump pulley attaching	4
3	RS2179	**Lockwasher**, water pump pulley attaching bolt	4
4	R065049	**Pulley**, water pump (70 Amp)	1
4	R065015	**Pulley**, water pump (100 Amp), (**NOTE:** Must replace item #27 at the same time)	1
NI	R096073	**Washer**, pulley (use with R065015 only)	2
5	90305275	**Bolt**, water pump mounting	1
6	R095026	**Stud**, water pump mounting	1
7	RA057027	**Water Pump Assembly**	1
8	RS0305	**Bolt**, lift bracket attaching	2
9	RS2180	**Lockwasher**, lift bracket attaching bolt	2
10	R042008	**Bracket**, lift	1
11	R090075	**Bracket**, alternator mounting	1
12	RS2180	**Lockwasher**, alternator mounting	1
13	RS1028	**Nut**, alternator mounting	1
14	RA097007B	**Alternator Assembly** (70 amp)	1
14	39236	**Alternator Assembly** (100 amp)	1
15	RS6531	**Bolt**, alternator mounting	1
16	RS2179	**Lockwasher**, alternator mounting bolt	1
17	RS2673	**Washer**, alternator mounting bolt	1
18	R099009	**Bracket**, alternator adjusting strap	1
19	RS2180	**Lockwasher**, alternator bracket attaching bolt	1
20	RS0304	**Bolt**, alternator bracket attaching	1
21	RS0316	**Bolt**, alternator mounting	1
22	RS2180	**Lockwasher**, alternator bracket attaching bolt	1
23	RS0306	**Bolt**, alternator bracket attaching	1
24	R095026	**Stud**, water pump mounting	1
25	RS0307	**Bolt**, water pump mounting	1
26	R064010A	**Balancer**, crankshaft	1
27	R065045	**Pulley**, alternator drive belt (70 Amp)	1
27	R065014	**Pulley**, alternator drive belt (100 Amp) (**NOTE:** Must replace item #4 at the same time)	1
28	R096074	**Washer**, crankshaft balancer	1
29	R009091	**Bolt**, crankshaft balancer	1
30	R094038	**Grommet**, rubber	1
31	RS2673	**Washer**, mounting bolt large	1
32	RS2179	**Washer**, mounting bolt small	1
33	RS0280	**Bolt**, raw water pump mounting	1
34	R090177A	**Bracket**, raw water pump mounting	1
35	RS2181	**Lockwasher**, raw water pump mounting bracket	2
36	RS0302	**Bolt**, raw water pump mounting bracket	2
37	RA057026	**Raw Water Pump Assembly**	1
38	R009161	**Bolt**, raw water pump-to-balancer mounting	3
39	RS2180	**Lockwasher**, raw water pump-to-balancer mounting	3
40	TBD	**Pulley**, Alternator, 3/8" Drive Belt (70 Amp)	1
40	R065041	**Pulley**, Alternator, 3/8" Drive Belt (100 Amp)	1
41	R176023	**Bushing**, 100 Amp Alternator	1
42	R062084	**Spacer** (use with 39236 only)	1

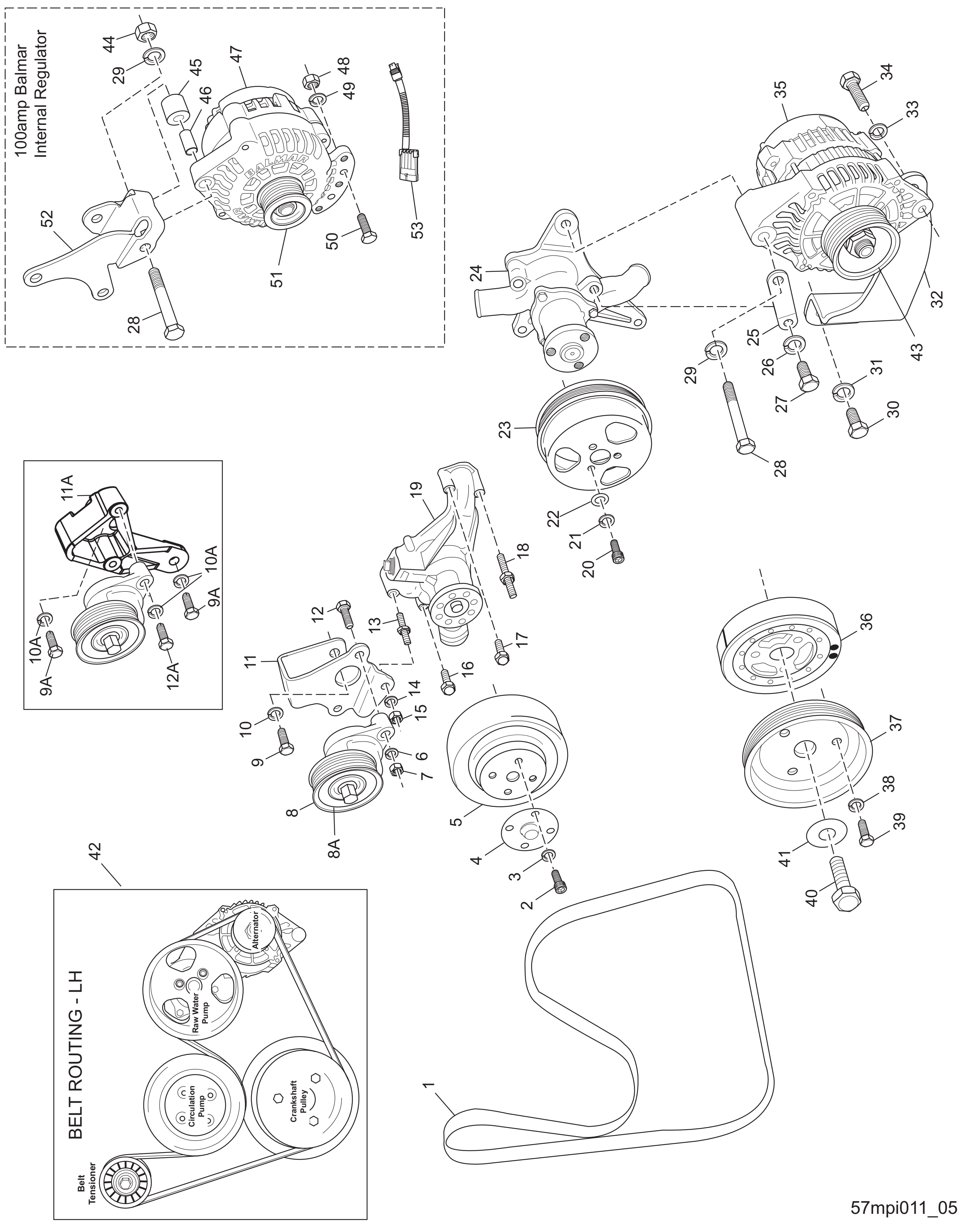
ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - LH) (‘05) - FIGURE 28



ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - LH) (‘05) - FIGURE 28

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066028	**Belt**, serpentine drive, 5.7L - LH (70 amp alternator)	1
1	R066030	**Belt**, serpentine drive, 5.7L - LH (100 amp alternator)	1
2	90274075	**Bolt**, water pump pulley attaching	4
3	RS2307	**Lockwasher**, water pump pulley attaching bolt	4
4	R096147	**Cover**, water pump pulley	1
5	R065053	**Pulley**, water pump	1
6	RS2180	**Lockwasher**, belt tensioner attaching	2
7	RS1028	**Nut**, belt tensioner attaching	2
8	RA068001	**Belt Tensioner Assembly**	1
8A	R065057	**Pulley**, Belt Tensioner	1
9	RS0304	**Bolt**, tensioner bracket attaching	1
9A	TBD	**Bolt**, cast tensioner bracket attaching	1
10	RS2180	**Lockwasher**, tensioner bracket attaching	1
10A	TBD	**Lockwasher**, cast tensioner bracket attaching	1
11	R090287	**Bracket**, belt tensioner mounting	1
11A	R090287A	**Bracket, Cast**, belt tensioner mounting (replaces R090287)	1
12	RS0307	**Bolt**, belt tensioner attaching	2
12A	TBD	**Bolt**, cast belt tensioner attaching	2
13	R095026	**Stud**, water pump mounting	1
14	RS2179	**Lockwasher**, belt tensioner attaching	2
15	RS1527	**Nut**, belt tensioner attaching	2
16	90305275	**Bolt**, water pump mounting	1
17	90305275	**Bolt**, water pump mounting	1
18	R095026	**Stud**, water pump mounting	1
19	RA057027	**Water Pump Assembly**	1
20	99335016	**Bolt**, RWP pulley attaching	3
21	93934000	**Lockwasher**, RWP pulley attaching	3
22	92934000	**Flatwasher**, RWP pulley attaching	3
23	R065052	**Pulley**, raw water pump	1
24	RA057034	**Raw Water Pump Assembly**	1
25	R090289	**Bracket**, alternator mounting	1
26	RS2180	**Lockwasher**, alternator mounting bolt	1
27	RS0304	**Bolt**, alternator mounting	1
28	RS0311	**Bolt**, alternator mounting	1
29	RS2180	**Lockwasher**, alternator mounting bolt	1
30	RS0304	**Bolt**, alternator bracket attaching	1
31	RS2180	**Lockwasher**, alternator bracket attaching bolt	1
32	R090288	**Bracket**, alternator mounting	1
33	RS7069	**Lockwasher**, alternator mounting bolt	1
34	RS6738	**Bolt**, alternator mounting	1
35	RA097007C	**Alternator Assembly** (70 amp serpentine)	1
36	R064010A	**Balancer**, crankshaft	1
37	R065051	**Pulley**, serpentine drive belt	1
38	RS2180	**Lockwasher**, drive belt pulley attaching bolt	3
39	90315100	**Bolt**, drive belt pulley attaching	3
40	R009091	**Bolt**, crankshaft balancer	1

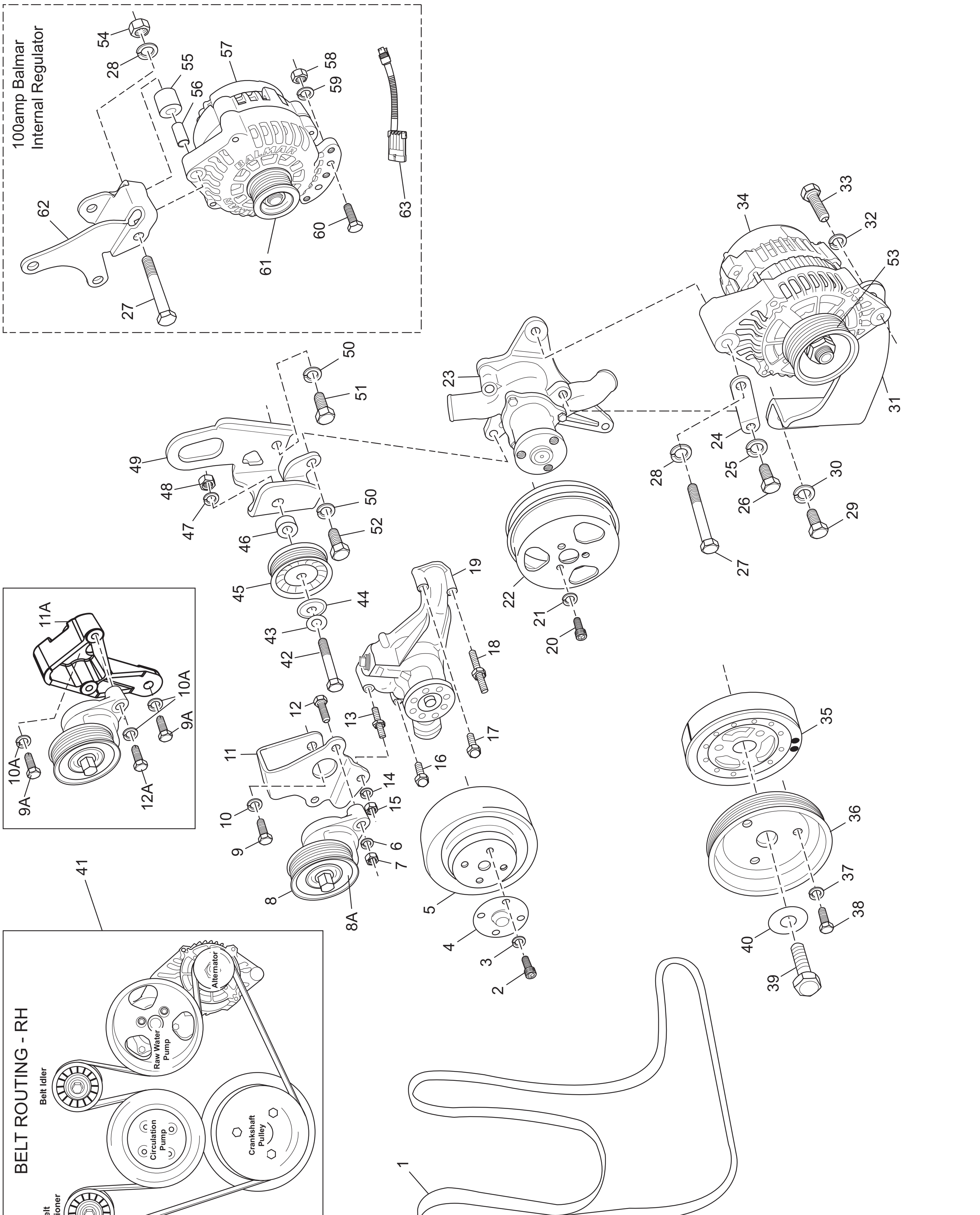
ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - LH) (‘05) - FIGURE 28 (cont’d)



ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - LH) (‘05) - FIGURE 28 (cont’d)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
41	R096074	**Washer**, crankshaft balancer	1
N.I.	97224000	**Nut**, alternator wire attaching	2
N.I.	93920000	**Lockwasher**, alternator wire attaching	2
42	R143165	**Decal**, belt routing (5.7L)	1
43	R065055	**Pulley**, Alternator (5.X/6.0L), Serpentine	1
44	RS1028	**Nut**, 100 amp alternator attaching	1
45	R062084	**Spacer**, 100 amp alternator attaching (upper)	1
46	R176023	**Bushing**, 100 amp alternator attaching (upper)	1
47	RA097010	**100 Amp Alternator Assembly**	1
48	RS7026	**Nut**, 100 amp alternator attaching (lower)	1
49	RS2179	**Lockwaser**, 100 amp alternator attaching (lower)	1
50	RS6531	**Bolt**, 100 amp alternator attaching (lower)	1
51	TBD	**Pulley**, 100 amp alternator serpentine	1
52	R090314	**Bracket**, 100 amp alternator mounting	1
53	R121081	**Adapter**, 100 amp alternator harness	1
N.I.	R101015	**Wire**, Ground, alternator (54”, 5.0/5.7/8.1L)	1
N.I.	R101017	**Wire**, Charge, alternator (5.0/5.7L)	1
N.I.	R153018A	**Wire**, Fused, starter to circuit breaker	1

ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - RH) (‘05) - FIGURE 29

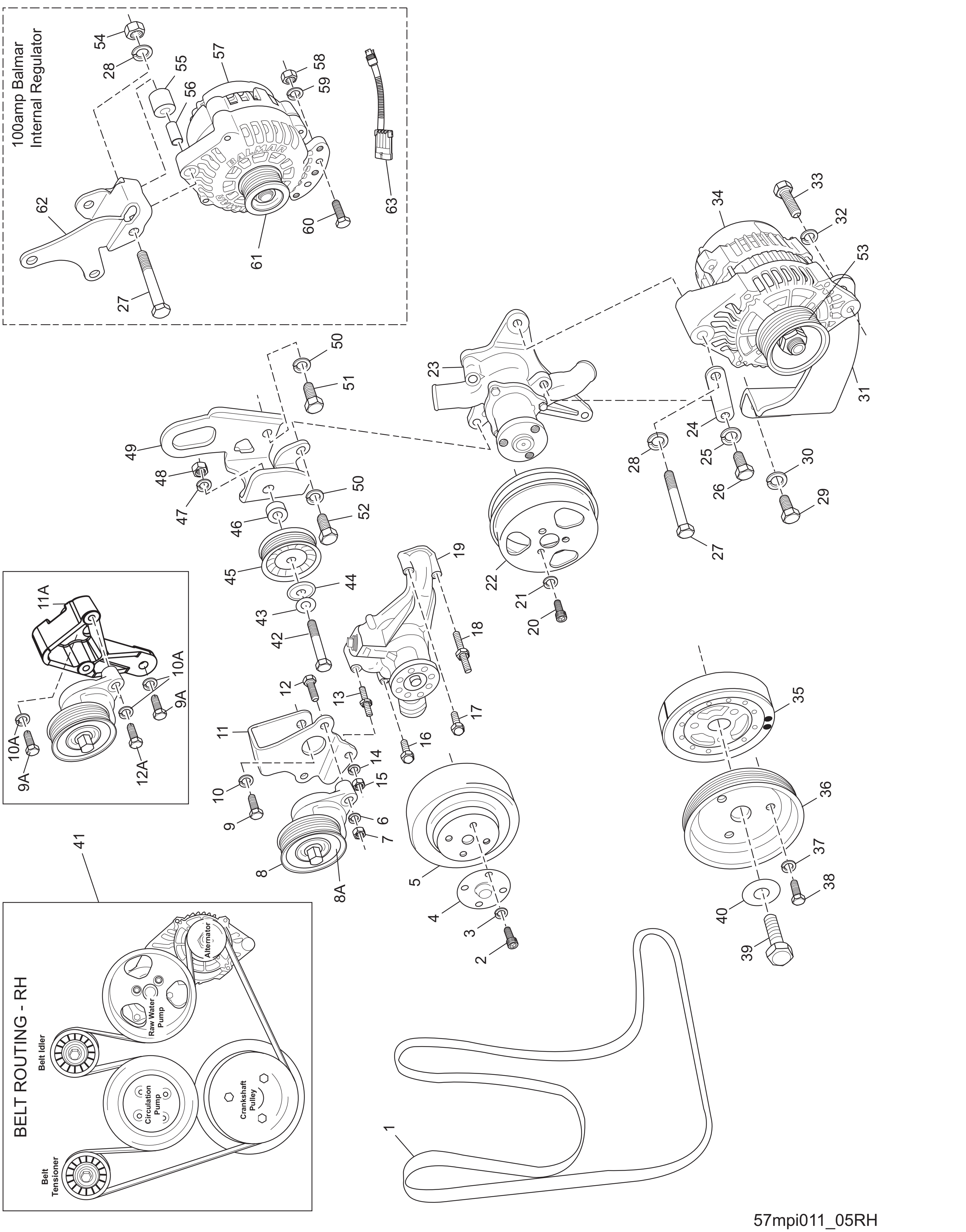


57mpi011_05RH

ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - RH) (‘05) - FIGURE 29

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066029A	**Belt**, serpentine drive, 5.7L (RH) (70 amp alternator)	1
1	R066031	**Belt**, serpentine drive, 5.7L (RH) (100 amp alternator)	1
2	90274075	**Bolt**, water pump pulley attaching	4
3	RS2307	**Lockwasher**, water pump pulley attaching bolt	4
4	R096147	**Cover**, water pump pulley	1
5	R065053	**Pulley**, water pump	1
6	RS2180	**Lockwasher**, belt tensioner attaching	2
7	RS1028	**Nut**, belt tensioner attaching	2
8	RA068001	**Belt Tensioner Assembly**	1
8A	R065057	**Pulley**, Belt Tensioner	1
9	RS0304	**Bolt**, tensioner bracket attaching	1
9A	TBD	**Bolt**, cast tensioner bracket attaching	1
10	RS2180	**Lockwasher**, tensioner bracket attaching	1
10A	TBD	**Lockwasher**, cast tensioner bracket attaching	1
11	R090287	**Bracket**, belt tensioner mounting	1
11A	R090287A	**Bracket, Cast**, belt tensioner mounting (replaces R090287)	1
12	RS0307	**Bolt**, belt tensioner attaching	2
12A	TBD	**Bolt**, cast belt tensioner attaching	2
13	R095026	**Stud**, water pump mounting	1
14	RS2179	**Lockwasher**, belt tensioner attaching	2
15	RS1527	**Nut**, belt tensioner attaching	2
16	90305275	**Bolt**, water pump mounting	1
17	90305275	**Bolt**, water pump mounting	1
18	R095026	**Stud**, water pump mounting	1
19	RA057027	**Water Pump Assembly**	1
20	99335016	**Bolt**, RWP pulley attaching	3
21	93934000	**Lockwasher**, RWP pulley attaching	3
22	R065052A	**Pulley**, raw water pump (RH)	1
23	RA057034	**Raw Water Pump Assembly**	1
24	R090289	**Bracket**, alternator mounting	1
25	RS2180	**Lockwasher**, alternator mounting bolt	1
26	RS0304	**Bolt**, alternator mounting	1
27	RS0311	**Bolt**, alternator mounting	1
28	RS2180	**Lockwasher**, alternator mounting bolt	1
29	RS0304	**Bolt**, alternator bracket attaching	1
30	RS2180	**Lockwasher**, alternator bracket attaching bolt	1
31	R090288	**Bracket**, alternator mounting	1
32	RS7069	**Lockwasher**, alternator mounting bolt	1
33	RS6738	**Bolt**, alternator mounting	1

ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - RH) (‘05) - FIGURE 29 (cont’d)

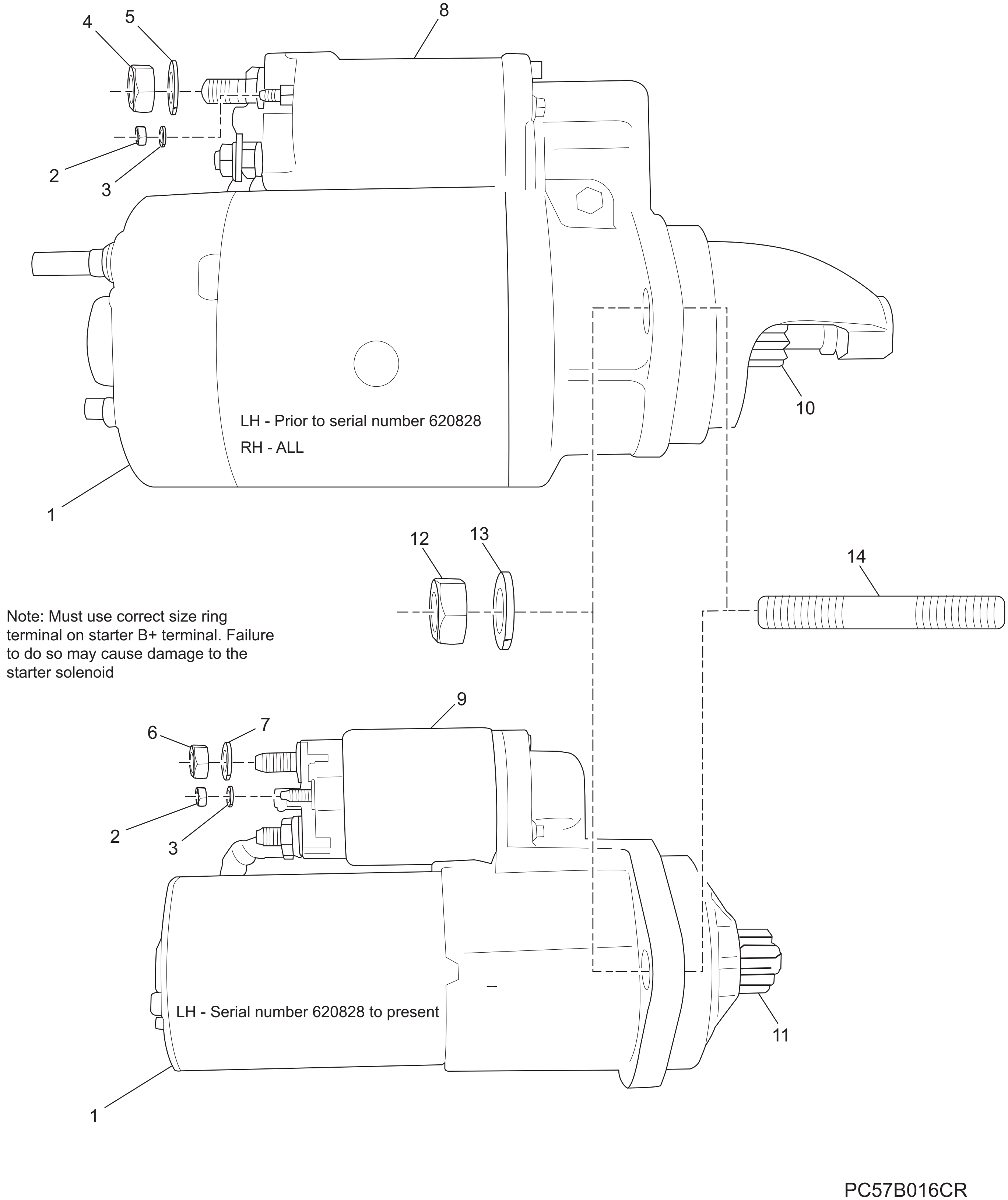


57mpi011_05RH

ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE - RH) (‘05) - FIGURE 29 (cont’d)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
34	RA097007C	**Alternator Assembly** (70 amp serpentine)	1
35	R064010A	**Balancer**, crankshaft	1
36	R065051	**Pulley**, serpentine drive belt	1
37	RS2180	**Lockwasher**, drive belt pulley attaching bolt	3
38	90315100	**Bolt**, drive belt pulley attaching	3
39	R009091	**Bolt**, crankshaft balancer	1
40	R096074	**Washer**, crankshaft balancer	1
N.I.	97224000	**Nut**, alternator wire attaching	2
N.I.	93920000	**Lockwasher**, alternator wire attaching	2
41	R143165A	**Decal**, belt routing, 5.7L (RH)	1
42	98443050	**Bolt**, Idler Pulley attaching	1
43	92940000	**Flat Washer**, Idler Pulley attaching	1
44	R096145	**Flat Washer**, Idler Pulley attaching	1
45	R065054	**Pulley**, Idler	1
46	R062083	**Spacer**, Idler Pulley	1
47	97440000	**Lock Washer**, Idler Pulley attaching	1
48	RS7027	**Nut**, Idler Pulley attaching	1
49	R090307	**Bracket**, Idler pulley 5.7 (RH)	1
50	RS2180	**Lock Washer**, Idler bracket attaching	2
51	RS0304	**Bolt**, Idler bracket attaching, upper	1
52	RS0306	**Bolt**, Idler bracket attaching,lower	1
53	R065055	**Pulley**, Alternator (5.X/6.0L), Serpentine	1
54	RS1028	**Nut**, 100 amp alternator attaching	1
55	R062084	**Spacer**, 100 amp alternator attaching (upper)	1
56	R176023	**Bushing**, 100 amp alternator attaching (upper)	1
57	RA097010	**100 Amp Alternator Assembly**	1
58	RS7026	**Nut**, 100 amp alternator attaching (lower)	1
59	RS2179	**Lockwaser**, 100 amp alternator attaching (lower)	1
60	RS6531	**Bolt**, 100 amp alternator attaching (lower)	1
61	TBD	**Pulley**, 100 amp alternator serpentine	1
62	R090314	**Bracket**, 100 amp alternator mounting	1
63	R121081	**Adapter**, 100 amp alternator harness	1
N.I.	R101015	**Wire**, Ground, alternator	1
N.I.	R101017	**Wire**, Charge, alternator	1
N.I.	R153018A	**Wire**, Fused, starter to circuit breaker	1

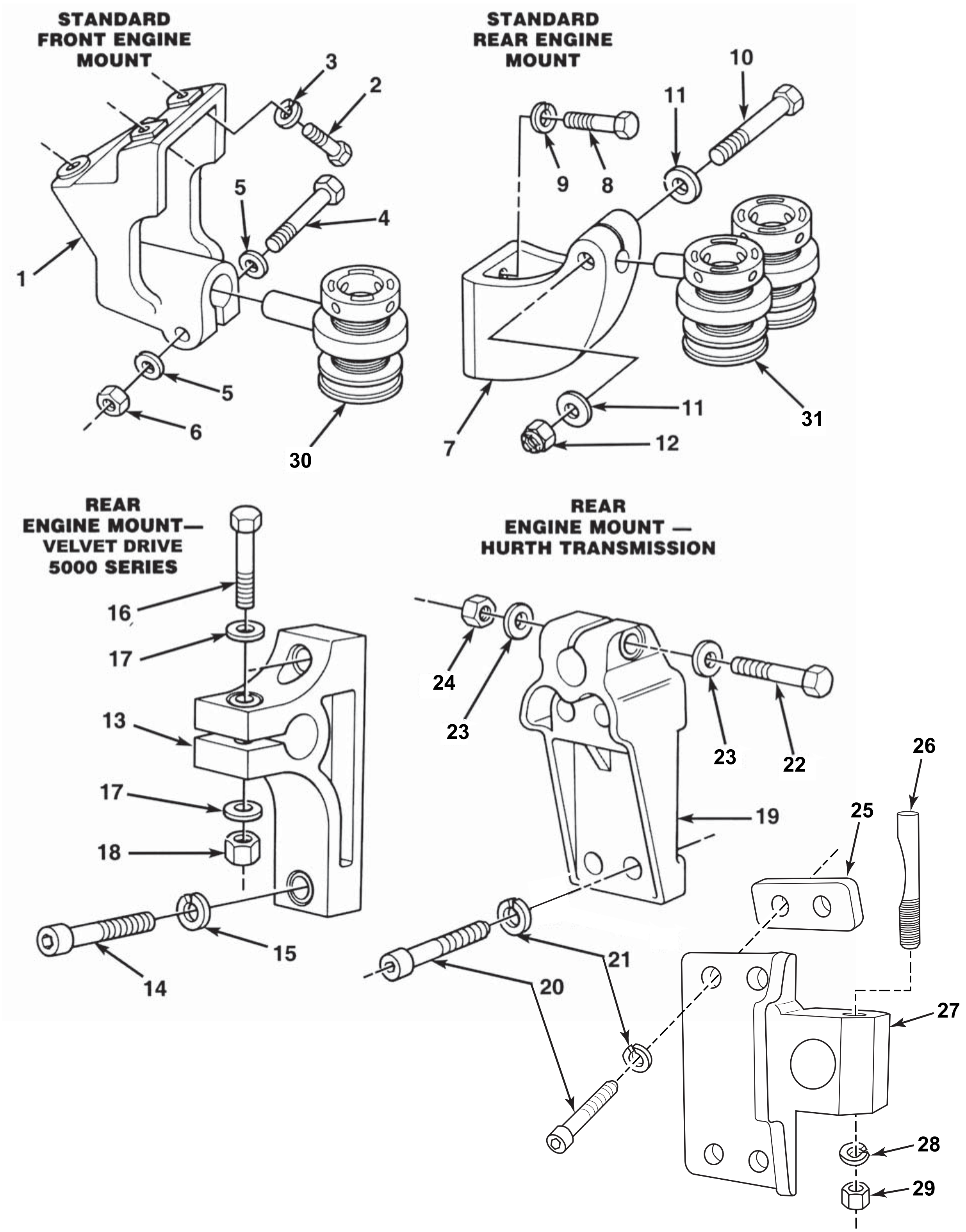
STARTER ASSEMBLY COMPONENTS - FIGURE 30



STARTER ASSEMBLY COMPONENTS - FIGURE 30

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA122009	**Starter Motor Assembly** (LH rotation)	1
1	RA122008	**Starter Motor Assembly** (RH rotation)	1
2	RS7036	**Nut**, solenoid terminal	1
3	93003000	**Lockwasher**, solenoid terminal	1
4	RS7019	**Nut**, solenoid terminal	1
5	RS7081	**Lockwasher**, solenoid terminal	1
6	RS7018	**Nut**, solenoid terminal	1
7	RS7080	**Lockwasher**, solenoid terminal	1
8	RU0050	**Solenoid Assembly**, starter	1
9	RU0050B	**Solenoid Assembly**, starter	1
10	RU0051	**Drive Assembly**, clutch (LH)	1
10	RU0052	**Drive Assembly**, clutch (RH)	1
11	TBD	**Drive**, starter	1
12	RS1029	**Nut**, starter mounting	2
13	RS2181	**Lockwasher**, starter mounting	2
14	R031018	**Stud**, starter mounting	2

ENGINE and TRANSMISSION MOUNTS - FIGURE 31



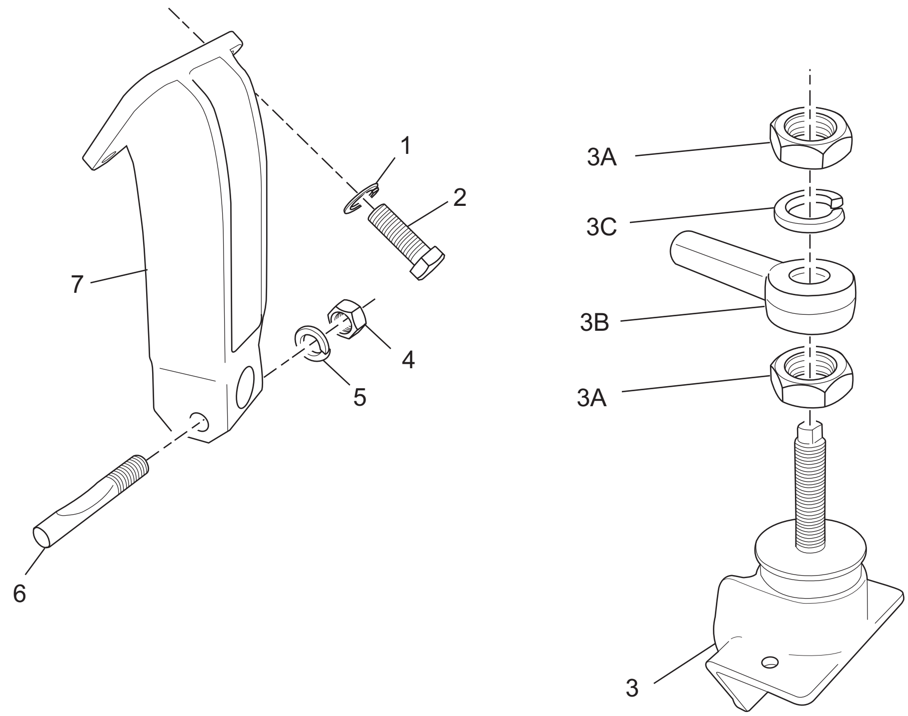
PC81017

ENGINE and TRANSMISSION MOUNTS - FIGURE 31

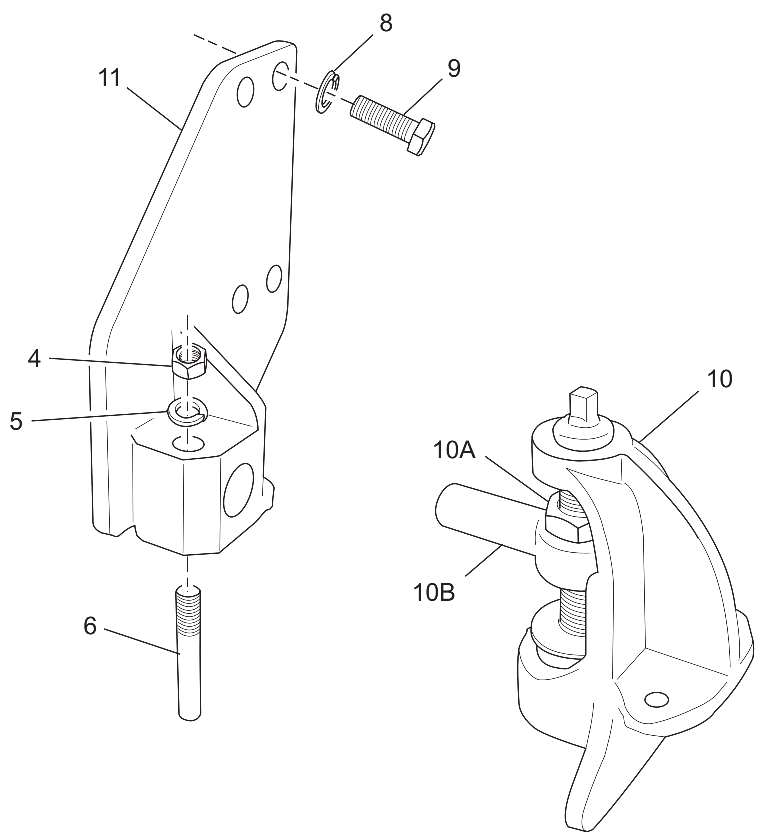
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
		****Standard Front Engine Mount****	
1	97938	**Bracket**, engine mounting (front)	2
2	RS0305	**Bolt**, socket head	4
2	RS3442	**Stud**	2
N.S.	RS1028	**Nut**, attaching	2
3	RS2180	**Lockwasher**, bracket mounting bolt	6
4	90318225	**Bolt**, trunnion shaft (2 1/4")	2
5	92300000	**Washer**, trunnion bolt	4
6	95310300	**Nut**, trunnion bolt - locking	2
		****Standard Rear Engine Mount****	
7	97917	**Bracket**, engine mounting (Rear)	2
8	RS0328	**Bolt**, bracket to transmission (1 1/4")	4
9	RS2181	**Lockwasher**, bracket mounting bolt	4
10	90318325	**Bolt**, trunnion shaft (3 1/4")	2
11	92300000	**Washer**, trunnion bolt	4
12	95310300	**Nut**, trunnion bolt - locking	2
		****Rear Engine Mount - Velvet Drive 5000 Series****	
13	98224	**Bracket**, transmission mounting (Starboard)	1
13	98225	**Bracket**, transmission mounting (Port)	1
14	RS6336	**Bolt**, bracket to transmission (12 mm x 60 mm)	4
15	RS7071	**Lockwasher** (12 mm)	4
16	90318325	**Bolt**, trunnion shaft (3 1/4")	2
17	92300000	**Washer**, trunnion bolt	4
18	95310300	**Nut**, trunnion bolt - locking	2
		****Rear Engine Mount - Hurth Transmission****	
19	R090174A	**Bracket**, engine mounting (rear)	2
20	RS6331	**Bolt**, bracket to transmission (12 mm x 35 mm)	4
20	RS6336	**Bolt**, bracket to transmission (12 mm x 60 mm)	4
21	RS7071	**Lockwasher** (12 mm)	8
22	90318325	**Bolt**, trunnion shaft (3 1/4")	2
23	92300000	**Washer**, trunnion bolt	4
24	95310300	**Nut**, trunnion bolt - locking	2
25	R109049	**Spacer**, bracket to transmission	2
26	R095020	**Bolt**, trunnion shaft	2
27	R090217	**Bracket**, engine mounting (port)	1
27	R090218	**Bracket**, engine mounting (starboard)	1
28	RS2181	**Lockwasher**, trunnion bolt	2
29	RS1529	**Nut**, trunnion bolt - locking	2
		****Mount Supports****	
30	97926	**Mount**, engine support (single front)	2
31	97905	**Mount**, engine support (dual rear)	2

OPTIONAL ENGINE and TRANSMISSION MOUNTS - FIGURE 32

OPTIONAL FRONT MOUNT



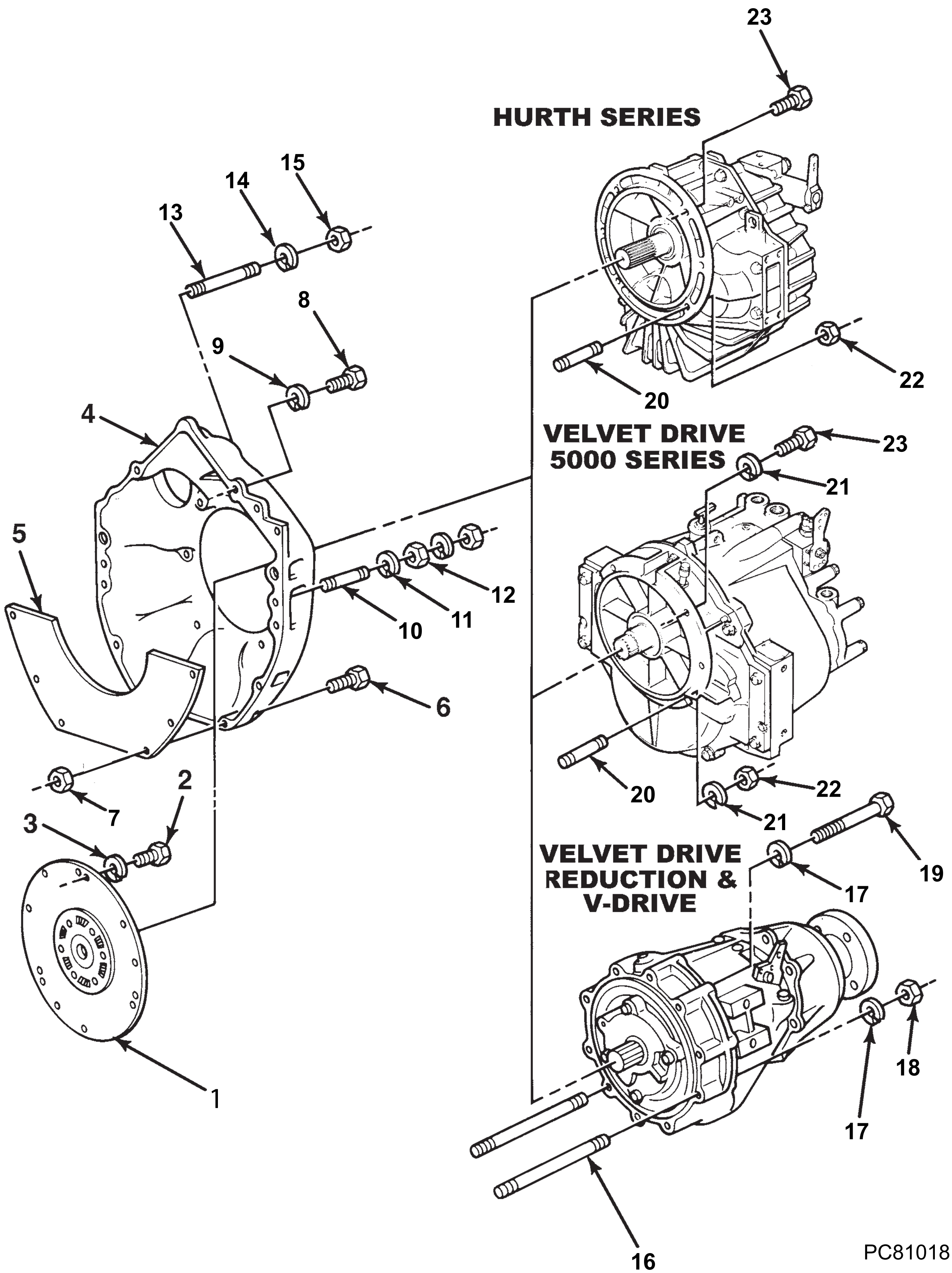
OPTIONAL REAR MOUNT -
HURTH GEAR



OPTIONAL ENGINE and TRANSMISSION MOUNTS - FIGURE 32

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS2180	**Lockwasher**, bracket mounting bolt	6
2	RS0305	**Bolt**, socket head	4
3	RC091001	**Trunnion Assembly**	2
3A	RS1075	**Nut**, adjustment and lock	4
3B	R091001	**Trunnion, long**	2
3C	RS2186	**Lockwasher**, adjusting nut	2
4	RS1529	**Nut**, trunnion bolt - locking	2
5	RS2181	**Lockwasher**, trunnion bolt	2
6	R095020	**Bolt**, trunnion shaft	2
7	R090071B	**Bracket**, engine mounting (front)	2
8	RS7071	**Lockwasher** (12 mm)	8
9	RS6336	**Bolt**, bracket to transmission (12 mm x 60 mm)	4
10	RA092011	**Trunnion Assembly**, tall	2
10A	R091003	**Trunnion**, 2.5”	2
10B	RS1075	**Nut**, adjustment and lock	2
11	R090312	**Bracket**, engine mounting (rear - port)	1
11	R090313	**Bracket**, engine mounting (rear - starboard)	1

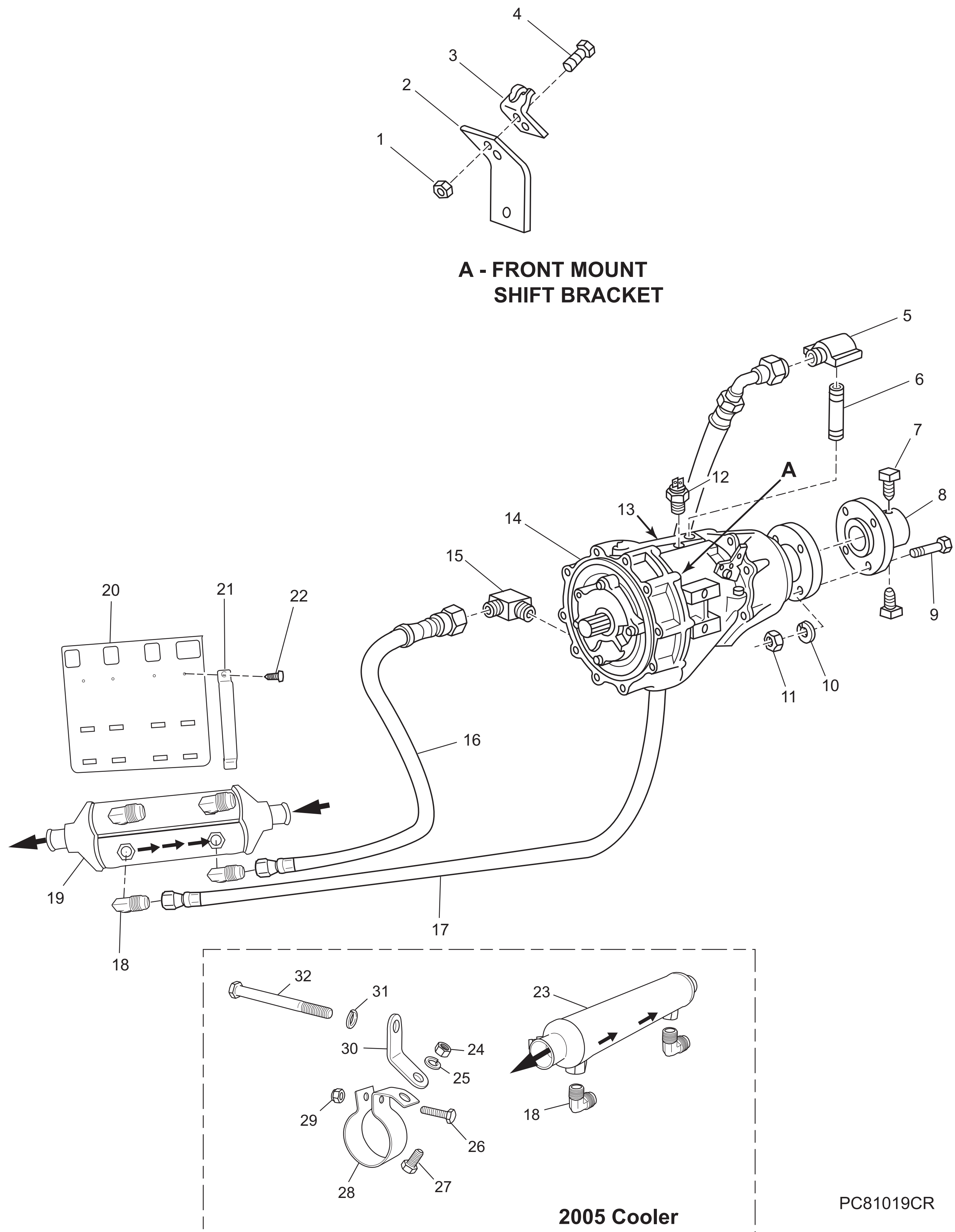
BELL HOUSING ASSEMBLY - FIGURE 33



BELL HOUSING ASSEMBLY - FIGURE 33

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R140019	**Drive Damper Assembly**, (Hurth - LH rotation Only)	1
1	98511	**Drive Damper Assembly**, (Standard Velvet Drive and ALL RH rotation)	1
2	R009092	**Bolt**, damper to flywheel (1”)	6
3	RS2180	**Lockwasher**, damper bolt	6
4	R142014	**Bellhousing**, flywheel	1
5	R019008	**Cover**, bellhousing (use w/top mount starter)	1
5	R019008A	**Cover**, bellhousing (use w/bottom mount starter)	1
NI	R019010	**Cover**, top mount starter (used w/R019008A)	1
NI	RS0327	**Bolt**, dust cover attaching	2
NI	RS2181	**Lockwasher**, dust cover attaching	2
6	RS0256	**Bolt**, cover to bellhousing (1”)	5
6	90105125	**Bolt**, cover to bellhousing (1 1/4”)	1
7	RS1078	**Nut**, cover bolt	6
8	98443050	**Bolt**, bellhousing to block	2
8	99443030	**Bolt**, SHCS (behind starter)	1
9	93940000	**Lockwasher**, bellhousing bolt	2
10	R031033	**Stud**, bellhousing mounting	2
11	RS2180	**Lockwasher**, mounting stud	4
12	RS1028	**Nut**, mounting stud	4
13	R031018	**Stud**, starter mounting (1 5/8”)	2
14	RS2181	**Lockwasher**, starter mounting stud	2
15	RS1029	**Nut**, starter mounting stud	2
		****Velvet Drive Reduction & “V”-Drive****	
16	96541	**Stud**, transmission mounting (4”)	2
17	RS2181	**Lockwasher**, transmission mounting	6
18	RS1029	**Nut**, transmission mounting stud	2
19	RS0337	**Bolt**, transmission mounting	4
		****Velvet Drive 5000 & Hurth Gears****	
20	R031018	**Stud**, transmission mounting (1 5/8”)	2
21	RS2180	**Lockwasher**, transmission mounting	6
22	RS1029	**Nut**, transmission mounting stud	2
23	RS0329	**Bolt**, transmission mounting	4

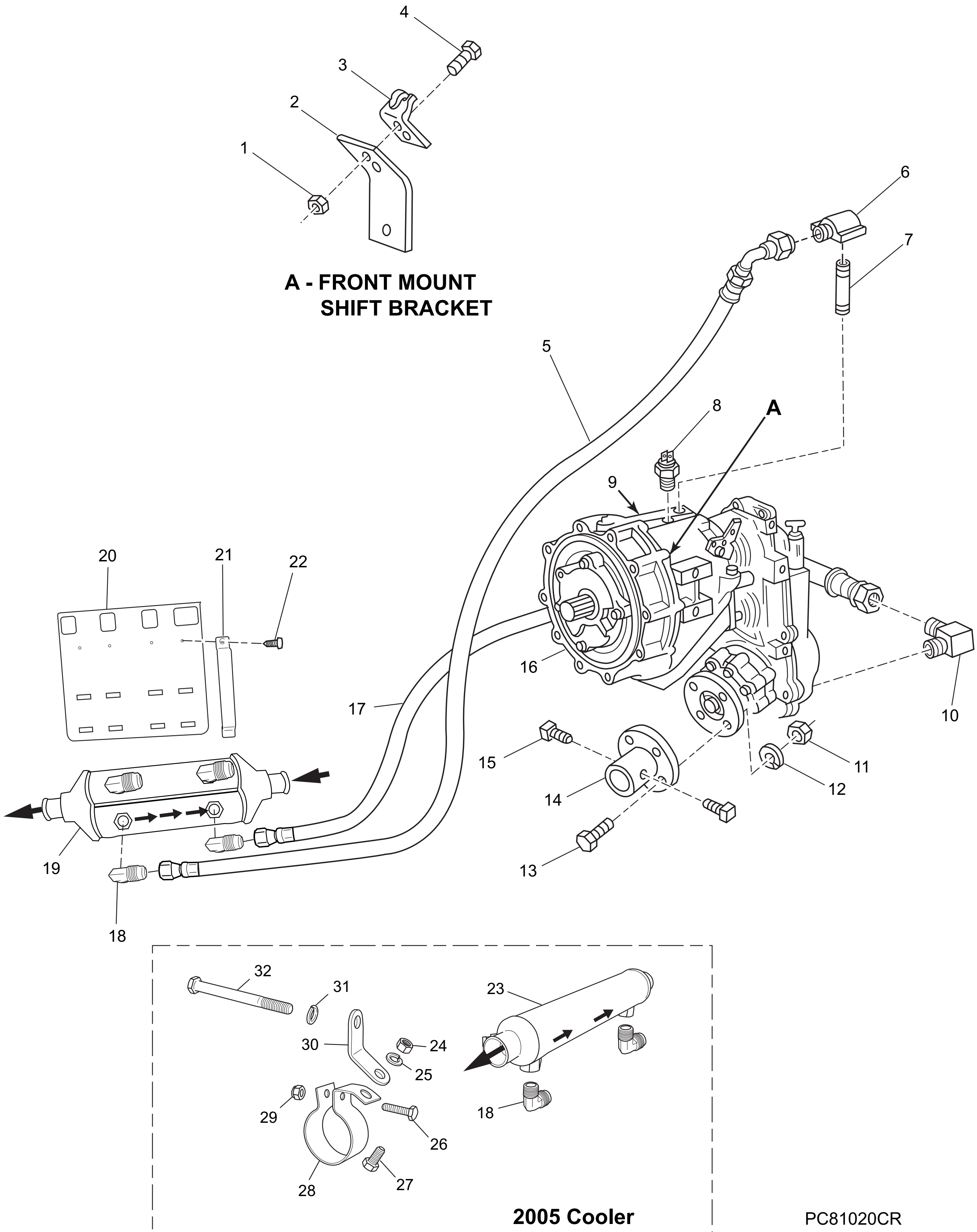
TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE IN-LINE) - FIGURE 34



TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE IN-LINE) - FIGURE 34

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS2055	**Nut,** attaching bolt	2
2	96341	**Shift Bracket** (front mount)	1
3	R090086	**Cable Clip**, single cable	1
3	22232	**Cable Clip**, dual cable clip (not shown)	OPT
4	RS5122	**Bolt,** clip attaching (1/2”)	2
5	R024008	**Elbow,** hose - transmission (90 degree)	1
6	RS4674	**Nipple,** pipe (3”)	1
7	RS3337A	**Screw,** set - coupler	2
8	R148001	**Coupler,** prop shaft (1” shaft)	OPT
8	R148002	**Coupler,** prop shaft (1 1/8” shaft)	OPT
8	R148003	**Coupler,** prop shaft (1 1/4” shaft)	OPT
8	R148004	**Coupler,** prop shaft (1 3/8” shaft)	OPT
8	R148005	**Coupler,** prop shaft (1 1/2” shaft)	OPT
8	R148007	**Coupler,** prop shaft (1 3/4” shaft)	OPT
8	R148008	**Coupler,** prop shaft (2” shaft)	OPT
9	22136	**Bolt,** coupling (1 1/2”)	4
10	RS2181	**Lockwasher,** coupling bolt	4
11	RS1529	**Nut,** coupling bolt	4
12	R020037	**Sender,** temperature alarm	1
13	R153002	**Switch Kit,** neutral start (not shown)	1
13A	25542	**Switch & O-Ring Assembly** (not shown)	1
14	RA157001	**Transmission** (71C, 1:1 Direct Drive)	1
14	RA157002	**Transmission** (71C, 1.52:1 Reduction)	1
14	RA157003	**Transmission** (72C, 1:1 Direct Drive)	1
14	RA157004	**Transmission** (72C, 1.52:1 Reduction)	1
14	RA157004A	**Transmission** (1.88:1 Reduction)	1
14	RA157004D	**Transmission** (2.57:1 Reduction)	1
14	RA157004E	**Transmission** (2.91:1 Reduction)	1
15	R024010	**Elbow,** hose - transmission (90 degree)	1
16	RA045007H	**Hose Assembly,** cooler to transmission	1
17	RA045007N	**Hose Assembly,** transmission to cooler	1
18	R024010	**Fitting,** 90 degree	2
19	R147035	**Oil Cooler Assembly**	1
20	R090194	**Bracket,** cooler	1
21	R171007	**Strap,** cooler mounting	2
22	RS5115	**Screw,** cooler mounting	2
23	R147006	**Cooler Assembly**, transmission oil (‘05)	1
24	RS1028	**Nut**, cooler bracket attaching	1
25	RS2180	**Lockwasher**, cooler bracket attaching	1
26	RS0256	**Bolt**, cooler bracket attaching	1
27	RS0302	**Bolt**, cooler bracket attaching	1
28	R090010	**Bracket**, transmission cooler mounting	1
29	RS2058	**Nut**, cooler bracket attaching	1
30	R090304	**Bracket**, transmission cooler attaching	1
31	RS2180	**Lockwasher**, cooler bracket mounting	1
32	RS0316	**Bolt**, cooler bracket mounting (exhaust manifold bolt)	1

TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE "V"-DRIVE) - FIGURE 35

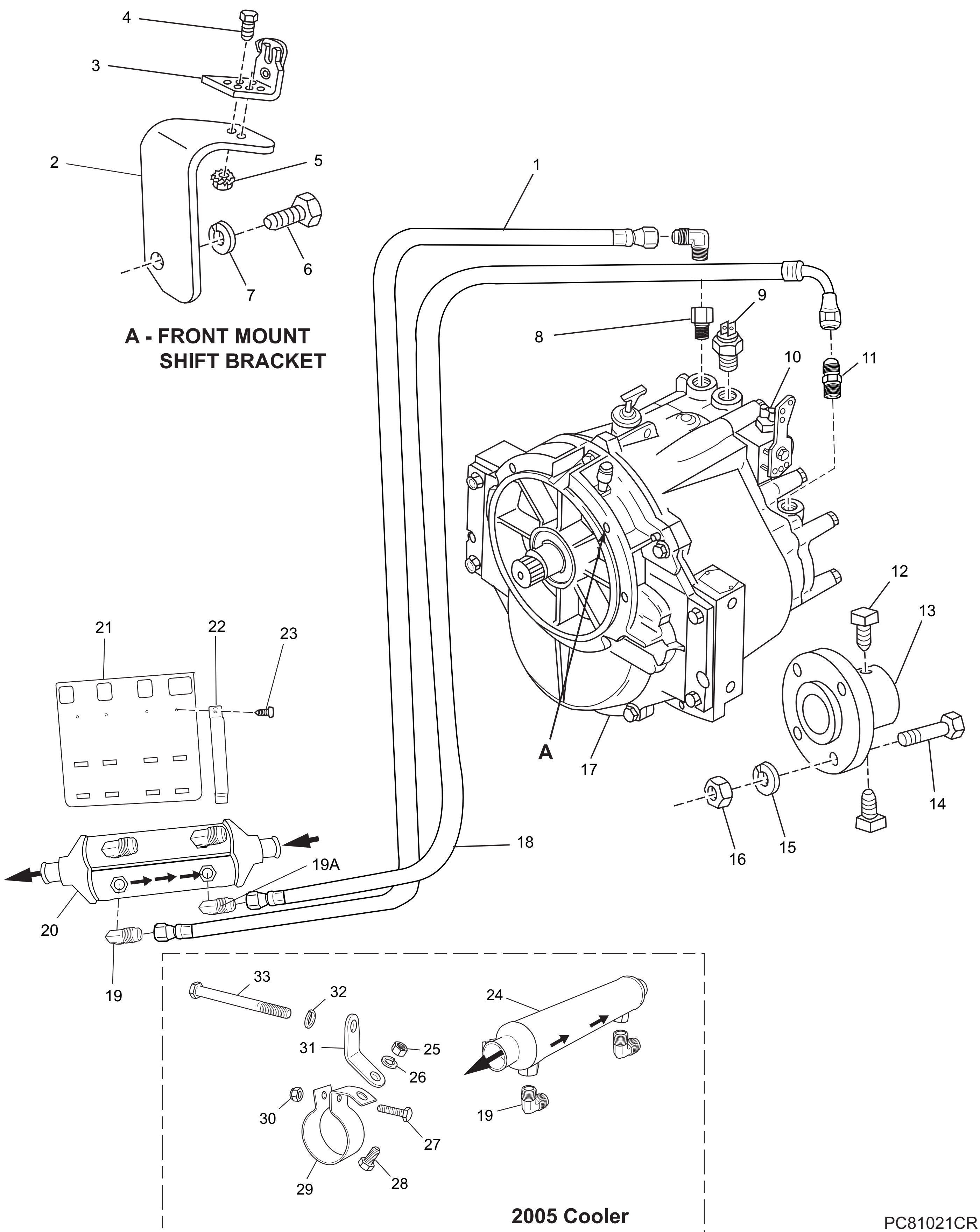


PC81020CR

TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE "V"-DRIVE) - FIGURE 35

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS2055	**Nut**, attaching bolt	2
2	96341	**Shift Bracket** (front mount)	1
3	R090086	**Cable Clip**, single cable	1
3	22232	**Cable Clip**, dual cable clip (not shown)	OPT
4	RS5122	**Bolt**, clip attaching (1/2")	2
5	RA045007N	**Hose Assembly**, transmission to cooler	1
6	R024008	**Elbow**, hose - transmission (90 degree)	1
7	RS4674	**Nipple**, pipe (3")	1
8	R020037	**Sender**, temperature alarm	1
9	R153002	**Switch Kit**, neutral start (not shown)	1
9A	25542	**Switch & O-Ring Assembly** (not shown)	1
10	R024010	**Elbow**, hose - transmission (90 degree)	1
11	RS1529	**Nut**, coupling bolt	4
12	RS2181	**Lockwasher**, coupling bolt	4
13	22136	**Bolt**, coupling (1 1/2")	4
14	R148001	**Coupler**, prop shaft (1" shaft)	OPT
14	R148002	**Coupler**, prop shaft (1 1/8" shaft)	OPT
14	R148003	**Coupler**, prop shaft (1 1/4" shaft)	OPT
14	R148004	**Coupler**, prop shaft (1 3/8" shaft)	OPT
14	R148005	**Coupler**, prop shaft (1 1/2" shaft)	OPT
14	R148007	**Coupler**, prop shaft (1 3/4" shaft)	OPT
14	R148008	**Coupler**, prop shaft (2" shaft)	OPT
15	RS3337A	**Screw**, set - coupler	2
16	RA156002B	**Transmission** (1.51:1 Reduction)	1
16	RA156002D	**Transmission** (1.99:1 Reduction)	1
16	RA156002E	**Transmission** (2.49:1 Reduction)	1
17	RA045007N	**Hose Assembly**, cooler to transmission	1
18	R024010	**Fitting**, 90 degrees	2
19	R147035	**Oil Cooler Assembly**	1
20	R090194	**Bracket,** cooler	1
21	R171007	**Strap,** cooler mounting	2
22	RS5115	**Screw,** cooler mounting	2
23	R147006	**Cooler Assembly**, transmission oil ('05)	1
24	RS1028	**Nut**, cooler bracket attaching	1
25	RS2180	**Lockwasher**, cooler bracket attaching	1
26	RS0256	**Bolt**, cooler bracket attaching	1
27	RS0302	**Bolt**, cooler bracket attaching	1
28	R090010	**Bracket**, transmission cooler mounting	1
29	RS2058	**Nut**, cooler bracket attaching	1
30	R090304	**Bracket**, transmission cooler attaching	1
31	RS2180	**Lockwasher**, cooler bracket mounting	1
32	RS0316	**Bolt**, cooler bracket mounting (exhaust manifold bolt)	1

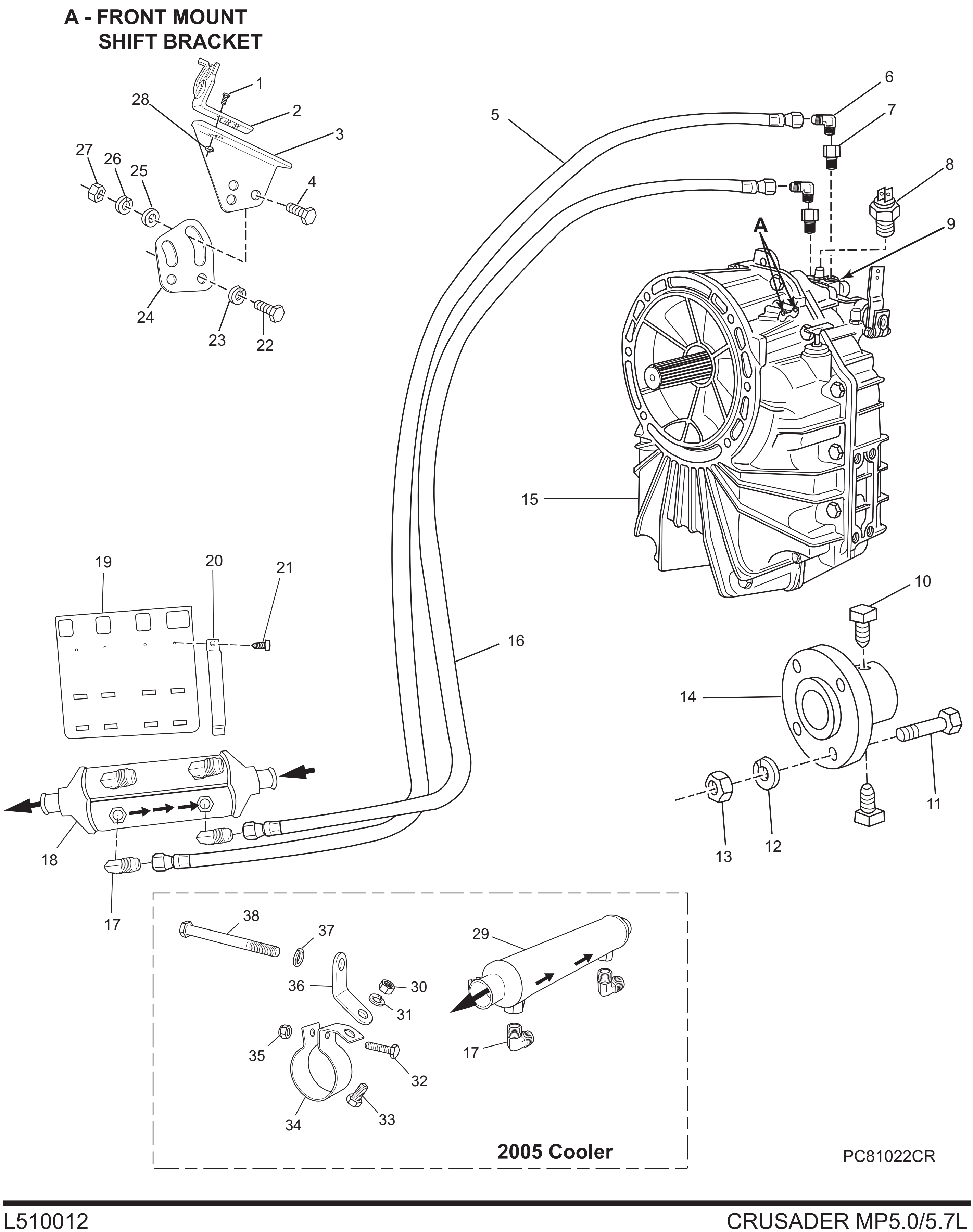
TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE 5000) - FIGURE 36



TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE 5000) - FIGURE 36

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA045007T	**Hose Assembly**, transmission to cooler	1
2	98227	**Shift Bracket**, (front entry)	1
3	R090086	**Cable Clip**, single cable	1
3	22232	**Cable Clip**, dual cable clip (not shown)	OPT
4	RS5122	**Bolt**, clip attaching (1/2”)	2
5	RS2055	**Nut**, attaching bolt	2
6	RS0329	**Bolt**, shift bracket attaching	2
7	RS2180	**Washer**, shift bracket attaching bolt	2
8	R024196	**Fitting**, adapter	1
9	R020037	**Sender**, temperature alarm	1
10	25542	**Switch & O-Ring Assembly** (not shown)	1
11	30603	**Fitting**, adapter	1
12	2000090	**Screw**, set - coupler	2
13	R148001	**Coupler**, prop shaft (1” shaft)	OPT
13	R148002	**Coupler**, prop shaft (1 1/8” shaft)	OPT
13	R148003	**Coupler**, prop shaft (1 1/4” shaft)	OPT
13	R148004	**Coupler**, prop shaft (1 3/8” shaft)	OPT
13	R148005	**Coupler**, prop shaft (1 1/2” shaft)	OPT
13	R148007	**Coupler**, prop shaft (1 3/4” shaft)	OPT
13	R148008	**Coupler**, prop shaft (2” shaft)	OPT
14	22136	**Bolt**, coupling (1 1/2”)	4
15	RS2181	**Lockwasher**, coupling bolt	4
16	RS1529	**Nut**, coupling bolt	4
17	RA157020B	**Transmission** (1.50:1 Reduction) Down Angle	1
17	RA157020C	**Transmission** (2:1 Reduction) Down Angle	1
17	RA157020D	**Transmission** (2.45:1 Reduction) Down Angle	1
17	RA157020E	**Transmission** (2.80:1 Reduction) Down Angle	1
17	RA156008	**Transmission** (1.25:1 Reduction) V-Drive	1
17	RA156008A	**Transmission** (1.50:1 Reduction) V-Drive	1
17	RA156008B	**Transmission** (2:1 Reduction) V-Drive	1
17	RA156008C	**Transmission** (2.50:1 Reduction) V-Drive	1
18	18203	**Hose Assembly**, cooler to transmission	1
19	R024010	**Fitting,** 90 degrees	2
19A	137425	**Fitting,** 90 degrees	1
20	R147035	**Oil Cooler Assembly**	1
21	R090194	**Bracket,** cooler	1
22	R171007	**Strap,** cooler mounting	2
23	RS5115	**Screw,** cooler mounting	2
24	R147006	**Cooler Assembly**, transmission oil (‘05)	1
25	RS1028	**Nut**, cooler bracket attaching	1
26	RS2180	**Lockwasher**, cooler bracket attaching	1
27	RS0256	**Bolt**, cooler bracket attaching	1
28	RS0302	**Bolt**, cooler bracket attaching	1
29	R090010	**Bracket**, transmission cooler mounting	1
30	RS2058	**Nut**, cooler bracket attaching	1
31	R090304	**Bracket**, transmission cooler attaching	1
32	RS2180	**Lockwasher**, cooler bracket mounting	1
33	RS0316	**Bolt**, cooler bracket mounting (exhaust manifold bolt)	1

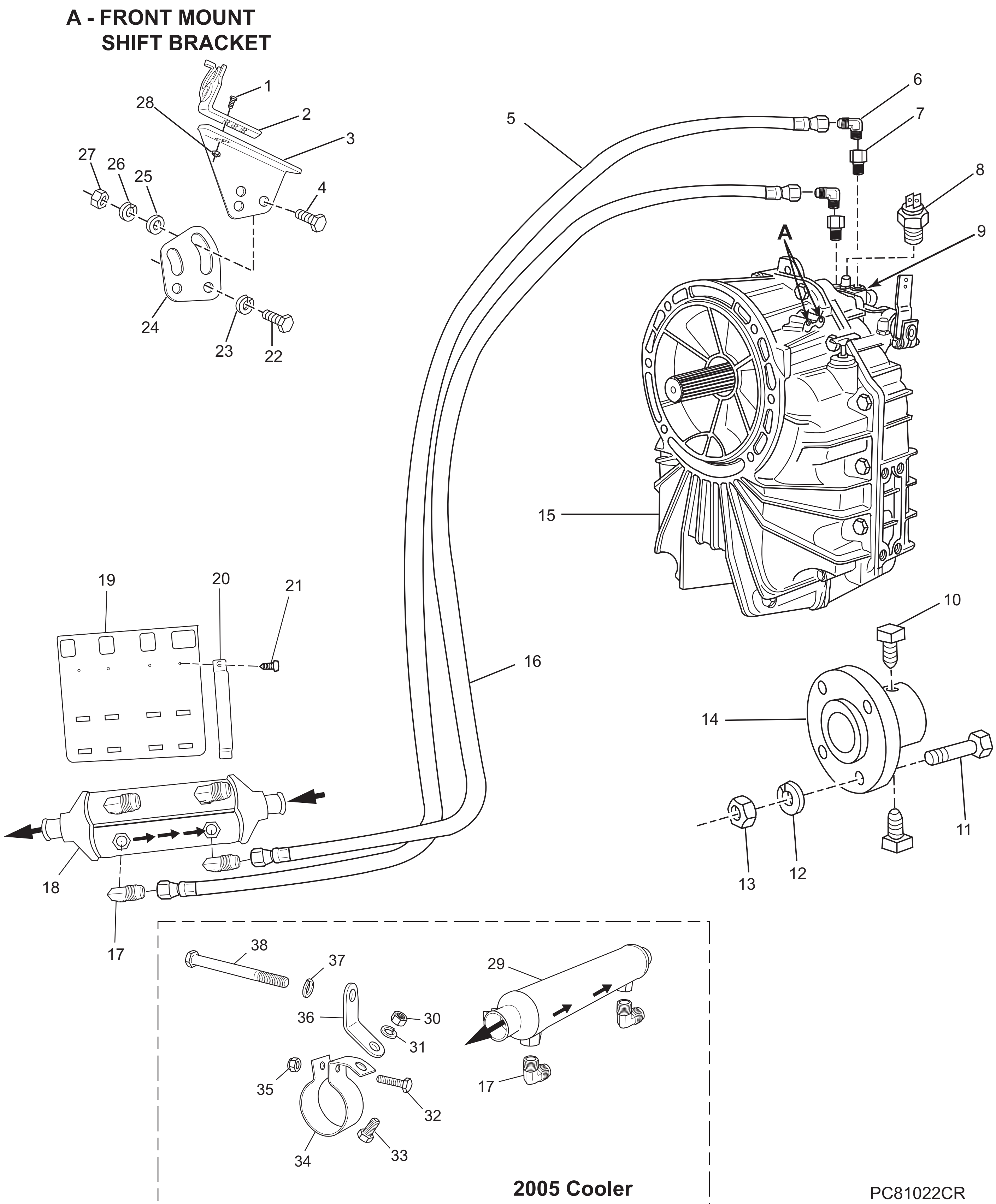
TRANSMISSION AND RELATED COMPONENTS (HURTH GEAR) - FIGURE 37



TRANSMISSION AND RELATED COMPONENTS (HURTH GEAR) - FIGURE 37

ITEM	PART NUMBER	DESCRIPTION		QUANTITY
1	RS5122	**Bolt**, cable clip attaching		2
2	R090086	**Cable Clip**, single cable		1
2	22232	**Cable Clip**, dual cable clip (not shown)		OPT
3	R090202	**Shift Bracket**, cable clip attaching		1
4	RS0282	**Bolt**, shift bracket attaching		2
5	RA045007H	**Hose Assembly**, transmission to cooler		1
6	R024010	**Fitting**, 90 degree		2
7	R024196	**Fitting**, adapter		2
8	R020037	**Sender**, temperature alarm		1
9	25542	**Switch & O-Ring Assembly** (not shown)		1
10	2000090	**Screw**, set - coupler		2
11	90418138	**Bolt**, coupling (1 3/8”)		4
12	RS2181	**Lockwasher**, coupling bolt		4
13	RS1529	**Nut**, coupling bolt		4
14	R148001	**Coupler**, prop shaft (1” shaft)		OPT
14	R148002	**Coupler**, prop shaft (1 1/8” shaft)		OPT
14	R148003	**Coupler**, prop shaft (1 1/4” shaft)		OPT
14	R148004	**Coupler**, prop shaft (1 3/8” shaft)		OPT
14	R148005	**Coupler**, prop shaft (1 1/2” shaft)		OPT
14	R148007	**Coupler**, prop shaft (1 3/4” shaft)		OPT
14	R148008	**Coupler**, prop shaft (2” shaft)		OPT
15	RA157022	**Transmission 630A** (1.22:1 Reduction)		1
15	RA157022A	**Transmission 630A** (1.55:1 Reduction)		1
15	RA157022B	**Transmission 630A** (2.00:1 Reduction)	8° Down	1
15	RA157022C	**Transmission 630A** (2.50:1 Reduction)	Angle	1
15	RA157022D	**Transmission 630A** (2.70:1 Reduction)		1
15	RA157023F	**Transmission 800A** (2.85:1 Reduction)		1
15	RA156009	**Transmission 630V** (1.29:1 Reduction)		1
15	RA156009A	**Transmission 630V** (1.50:1 Reduction)	V-Drive	1
15	RA156009B	**Transmission 630V** (2.00:1 Reduction)		1
15	RA156009C	**Transmission 630V** (2.50:1 Reduction)		1
16	RA045007P	**Hose Assembly**, cooler to transmission		1
17	R024010	**Fitting**, 90 degrees		2
18	R147035	**Oil Cooler Assembly**		1
19	R090194	**Bracket,** cooler		1
20	R171007	**Strap,** cooler mounting		2
21	RS5115	**Screw,** cooler mounting		2
22	RS6531	**Bolt**, shift bracket attaching		2
23	93930000	**Lockwasher**, shift bracket attaching bolt		2
24	R090235	**Bracket**, shift		1
25	RS2674	**Washer**, shift bracket attaching bolt		2
26	RS2179	**Lockwasher**, attaching bolt		2
27	RS1027	**Nut**, shift bracket attaching bolt		2
28	RS2055	**Nut**, cable clip attaching bolt		2

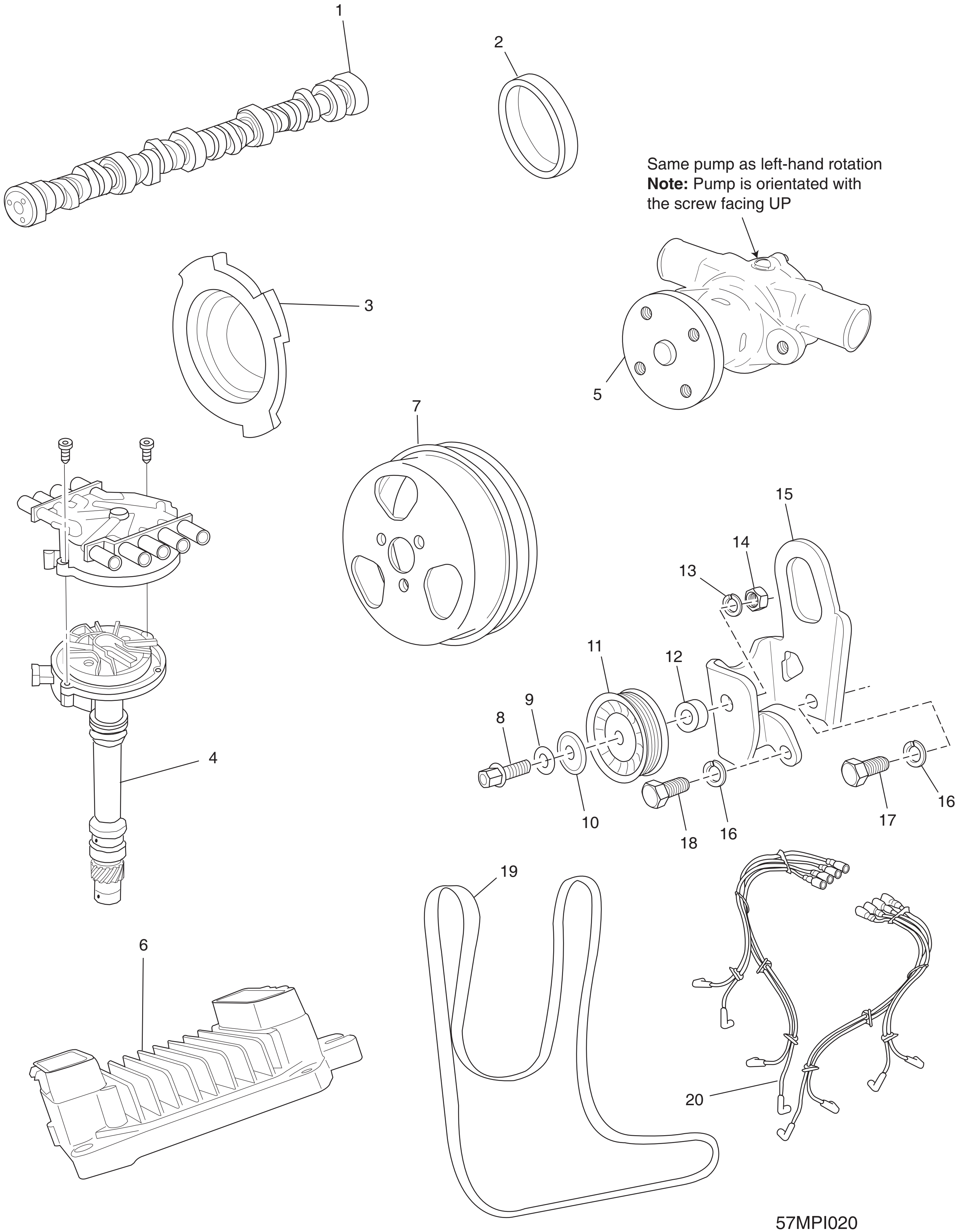
TRANSMISSION AND RELATED COMPONENTS (HURTH GEAR) (cont'd) - FIGURE 37



TRANSMISSION AND RELATED COMPONENTS (HURTH GEAR) (cont'd) - FIGURE 37

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
29	R147006	**Cooler Assembly**, transmission oil ('05)	1
30	RS1028	**Nut**, cooler bracket attaching	1
31	RS2180	**Lockwasher**, cooler bracket attaching	1
32	RS0256	**Bolt**, cooler bracket attaching	1
33	RS0302	**Bolt**, cooler bracket attaching	1
34	R090010	**Bracket**, transmission cooler mounting	1
35	RS2058	**Nut**, cooler bracket attaching	1
36	R090304	**Bracket**, transmission cooler attaching	1
37	RS2180	**Lockwasher**, cooler bracket mounting	1
38	RS0316	**Bolt**, cooler bracket mounting (exhaust manifold bolt)	1
NI	RP077011	Kit, transmission oil filter (ZF)	AR

RIGHT HAND ROTATION ENGINE COMPONENTS - FIGURE 38



RIGHT HAND ROTATION ENGINE COMPONENTS - FIGURE 38

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
*	RB001005A	**Base Engine Assembly (RH)**	1
NI	98511	**Drive Damper Assembly**, (ALL RH rotation)	1
1	RA050022	**Camshaft**, engine **(RH)**	1
2	R047175	**Seal**, crankshaft rear oil **(RH)**	1
3	R056001A	**Ring**, crankshaft position sensor reluctor (RH)	1
4	RA107045	**Distributor Assembly (RH)**	1
5	RA057031	**Raw Water Pump Assembly (‘02-’04)** (SEE NOTE)	1
6	R116021E	**Engine Control Module (5.7L - RH)**	1
7	R065052A	**Pulley**, raw water pump **(RH),** (MY ‘05)	1
8	98443050	**Bolt**, Idler Pulley attaching (MY ‘05)	1
9	92940000	**Flat Washer**, Idler Pulley attaching (MY ‘05)	1
10	R096145	**Flat Washer**, Idler Pulley attaching (MY ‘05)	1
11	R065054	**Pulley**, Idler (MY ‘05)	1
12	R062083	**Spacer**, Idler Pulley (MY ‘05)	1
13	93940000	**Lock Washer**, Idler Pulley attaching (MY ‘05)	1
14	L00908	**Nut**, Idler Pulley attaching (MY ‘05)	1
15	R090307	**Bracket**, Idler pulley 5.7 **(RH)** (MY ‘05)	1
16	RS2180	**Lock Washer**, Idler bracket attaching (MY ‘05)	2
17	RS0304	**Bolt**, Idler bracket attaching, upper (MY ‘05)	1
18	RS0306	**Bolt**, Idler bracket attaching,lower (MY ‘05)	1
19	R066029A	**Belt**, serpentine drive, 5.7L **(RH)** (MY ‘05)	1
20	RK120020	**Spark Plug Wire Set (5.0/5.7 RH)**	1

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
*	**RK173089A**	**Kit, On-Board Parts 5.7L, FCC Fuel System**	
	22433	**Box**, On-Board Kit	1
	96307	**V-Belt**, alternator drive	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061017	**Impeller Kit**	1
	RP080026	**Filter & O-Ring**, kit, FCC	1
*	**RK173089B**	**Kit, On-Board Parts 5.7L, Returnless Fuel System (thru S/N 630209)**	
	22433	**Box**, On-Board Kit	1
	96307	**V-Belt**, alternator drive	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061017	**Impeller Kit**	1
	R077013	**Filter Screen**, 115 micron, Oberg Fuel Filter	1
	47047	**Filter Element**, Racor fuel/water separator	1
*	**RK173089C**	**Kit, On-Board Parts 5.7L, Returnless Fuel System (S/N 630210 thru present)**	
	22433	**Box**, On-Board Kit	1
	96307	**V-Belt**, alternator drive	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061017	**Impeller Kit**	1
	R077012	**Filter Screen**, Oetiker Fuel Filter	1
	47047	**Filter Element**, Racor fuel/water separator	1

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
*	**RK173089D-05**	**Kit, On-Board Parts 5.7L (LH), FCC Fuel System**	
	22433	**Box**, On-Board Kit	1
	R066028	**Belt**, Serpentine	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R153017B	**Fuse**, 20 Amp	3
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061022	**Impeller Kit**	1
	RP077014	**Primary Fuel Filter Element**, 150 Micron	1
	RP080026	**Filter & O-Ring**, kit, FCC	1
*	**RK173089E-05**	**Kit, On-Board Parts 5.7L (RH), FCC Fuel System**	
	22433	**Box**, On-Board Kit	1
	R066029A	**Belt**, Serpentine	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R153017B	**Fuse**, 20 Amp	3
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061022	**Impeller Kit**	1
	RP077014	**Primary Fuel Filter Element**, 150 Micron	1
	RP080026	**Filter & O-Ring**, kit, FCC	1
*	**RK173089F-05**	**Kit, On-Board Parts 5.7L (LH), Returnless Fuel System**	
	22433	**Box**, On-Board Kit	1
	R066028	**Belt**, Serpentine	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R153017B	**Fuse**, 20 Amp	3
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061022	**Impeller Kit**	1
	RP077014	**Primary Fuel Filter Element**, 150 Micron	1
	47047	**Filter Element**, Racor fuel/water separator	1
*	**RK173089G-05**	**Kit, On-Board Parts 5.7L (RH), Returnless Fuel System**	
	22433	**Box**, On-Board Kit	1
	R066029A	**Belt**, Serpentine	1
	R103011	**Rotor**, Distributor (HVS)	1
	RA108009	**Cap**, Distributor (HVS)	1
	R153017B	**Fuse**, 20 Amp	3
	R130012	**Relay**, 12V, Fuel Pump, Start, MEFI	1
	RP030010	**Spark Plug**, set of 8, Platinum	1
	RP061022	**Impeller Kit**	1
	RP077014	**Primary Fuel Filter Element**, 150 Micron	1
	47047	**Filter Element**, Racor fuel/water separator	1